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Editorials

Guest Editorial

LOCAL PUBLIC HEALTH SERVICE

HAVEN EMERSON, M.D.
NEW YORK CITY

What does it mean to the practicing physician? How shall it be defined? When is it adequate? Is it necessary for the family, the patient, his doctor?

These and a flock of similar questions are bound to be raised as soon as enabling legislation and tax appropriations are under consideration, or have been put into effect, to create something new, better, substantial, in the way of a local, city, county or district health department.

Each of the four levels or orders of public health service is of immediate or remote, personal or communal concern to us here in the U. S. A.

We are, all of us, concerned even though quite impersonally with the novelty, the scope, the social vision, and the professional ambition of the World Health Organization of the United Nations. We shall share nationally in a rising standard of health in proportion to the abatement of disease among backward and impoverished peoples in other lands. This international health effort will be successful through example and precept, teaching and cooperation in the dissemination of the useful facts of preventive medicine, but not through exercise of international authority or by the delivery of personal service by the World Health Organization in any of the nations.

The functions of this successor to the Health Section of the League of Nations will be advisory when request for advice is received from a nation or a group of them, consultative, standardizing in respect to the procedures of marine and aerial quarantine, and in that of biological and other specific therapeutic medicaments, particularly vaccines, sera and the products needed in creating artificial immunity. The familiar epidemiological and statistical studies and reports, so fertile and helpful around the world since 1920, will again be available. Above all, will be authoritative information or public health education to exchange the wisdom of each country with that of its neighbors for the quicker and more effective raising of the level of the public health. We as a nation, will be better prepared to meet our own national problems by virtue of sharing in the evidence of trends and prevalence of disease among peoples with whom we have commercial or travel relationships.

But, except at our own choice and for some special study or observation of our methods and results, we shall not see or meet or be related in our federal, state and local health work to the personnel and routine functions of public health at the international level, as these will be carried on by the World Health Organization. Nor has

the World Health Organization any authority by which it can intervene, alter or require changes in the public health functions of our own various civil governments.

Our federal public health functions, now under the administrative umbrella of the Social Security Administration, will continue to be to some extent duplicating, conflicting and but poorly coordinated as long as the Children's Bureau retains its almost as complete autonomy as when under the Department of Labor. In the main, the federal health services will, as for many decades, exercise their advisory, consultive, standardizing, research and financial assistance functions with respect to public health departments of states and through these to local jurisdictions of government. The U. S. Public Health Service will continue to make effective international sanitary conventions to which U. S. A. has signed its adherence. Interstate commerce will continue to be subject to sanitary requirements of the U. S. Public Health Service in cooperation with State Health Departments.

It must be remembered, however, that no federal health authority has any jurisdiction over state and local civil governments in respect to supplying personal services or exercising its police power under sanitary law. These functions are specifically reserved to the several and sovereign states. There is much friendly and helpful cooperation and collaboration among states and between states and federal governments, particularly in matters of vital statistics, communicable disease control and sanitation of interstate water supplies and waste disposal systems. On the request of the State Health Officer with the consent or approval of the Governor, the U. S. Public Health Service may be invited to undertake studies and administrative surveys and even direct services in the interest of the public health of a state of one of its subdivisions of local government, but the federal

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government can not exercise independent authority or make requirements or sanitary regulations not provided for by State Stature or local sanitary ordinance.

The third level of public health services is that of the State Health Department which varies somewhat in the several states but in the main is concerned with making effective the state public health laws and the rules and regulations issued by the State Board of Health or Public Health Council.

Here too the functions of the state health authority do not ordinarily include direct personal services by physicians and nurses to the people of local communities which have their own health officer and public health nurses. Generally the functions of the state department of health are supervisory, consultative, standard making and policy forming. Only in respect to the registration of births and deaths in the work of the central and branch public health laboratory does the physician and patient of a local community have any personal contact with the state department of health. Indispensable coordination, leadership, enforcement of standards, epidemiological advice, emergency assistance to local health officers, central statistical information and public health education service, all these are functions of the state health department.

When we consider the fourth level, which should properly be called the first because it preceded in origin each of the other three and is the true foundation and basis of public health service in the U. S. A., we find the situation fundamentally different because it is here that essential services of a public health department are rendered directly, and personally, to the people of the community, whether of village, town, city or county or combinations of some or all of these under a single local health jurisdiction.

This is where preventive medicine for people as a whole clicks with the preventive and diagnostic and therapeutic services of the physician to his individual patient and family.

There can be no substantial success from the work of a state department of health unless every community in the state has its own adequate local health service. Similarly there would be no effective results from federal and international health organizations unless these are built upon the universal provision of personal and community services at the local level.

It behooves us to be critical and understanding about this basic application of the sciences and arts of preventive medicine for the benefits of the community by the local health department.

Some 40 million of our fellow citizens in continental U. S. A. still lack the form, structure, personnel, budgetary resources and services of what I shall describe as a minimum basic local health department. Even so advanced and liberal a state as Illinois still has a substantial percentage of its population lacking full-time medically directed local health service. This is to be remedied promptly as soon as the necessary medical, nursing and sanitary personnel can be found.

The local health department has six functions, as follows:

1. Registration of births, deaths and notifiable disease, including the verification of the accuracy and completeness of reports, their tabulation, analysis, interpretation and publication as a basis of administrative action and public information.

2. Control of the communicable diseases including tuberculosis, the venereal infections, malaria and hook-worm disease, where necessary providing for vaccination of children who have not the benefit of services of a private physician.

3. Environmental sanitation including supervison of water, milk, foods and drugs, and the conditions of people engaged in gainful occupation (occupational hygiene).

4. Public health laboratory services either locally or through the state central or branch laboratory, for quick reliable indentification of infections, industrial poisons, examination of water, milk etc.

5. The supervision and protection of the health of maternity, infancy, and the child of preschool and school age so far as this is necessary to supplement the care provided by the family physician, the obstetrician and the pediatrist.

6. Health information, so-called public health education, when this is the only resource for the development of an understanding of the preventable diseases by physicians and the laity and the forming of habits and customs which will contribute to the avoidance, or proper action in the presence, of disease which can not be properly brought within the authority of sanitary law.

The local health department has only two re-

sources, one the authority of sanitary law, that is the exercise of the police power of the state in the interest of health protection and promotion, the other education, example, demonstration, or public information of a scientific validity and from a source of accepted authority.

To supply these services a local community with its own tax resources or aided by state grants from its own or also from federal resources will have to spend not less than one dollar per capita of the people served. In New York State it has been found that $1.50 per capita is necessary at present salary levels. The average throughout the U. S. A. in 1945 was about 67c per capita. The essential and minimum full-time personnel for a community of 50,000 persons, as in a county, city-county or multi-county local health unit, is sixteen persons, as follows:

1 medical health officer
1 public health or sanitary engineer
1 assistant sanitarian of sub-professional grade
10 public health nurses of whom one should be of supervisory grade
3 secretarial or clerical office employees

Some part-time clinical services of physicians may be needed for school medical examinations, and for child health conferences and for tuberculosis and venereal disease patients.

Only by the most intimate and wholehearted collaboration of the physicians, school teachers, parent associations, employers of labor in office or factory and the support of the press and churches and voluntary health agencies can the optimum results be obtained under such professional health leadership.

The services that can and should be rendered by a local health department so led and supported are essential functions of civil government and required by intelligent people as the best means of taking advantage of the rapidly advancing science and art of preventive medicine.

The six functions above summarized can be carried on only through local civil government. They will be futile and unproductive if attempted in a professional, social and economic vacuum. They are part of the pattern of American life where self-government, self-determination, self-support and means of exchange of information and a good school system exist.

This minimum basic local health service is approved by the national professional associations of competence, the American Public Health Association, and the American Medical Association. It is a primary obligation of the State and County Medical Societies to make sure that this minimum of health service is provided throughout their respective states.

Those counties that already have such local health departments in operation in Illinois know very well that the personnel of this official representative of medical science in civil government cooperates with physicians in preventive measures; is alert to emergency needs to protect against epidemics and catastrophes of a physical nature; is a persuasive force to bring expectant mothers under early medical care; make parents aware of the benefits of immunization procedures; make nurses' visits available in the home at the request of physicians; accept gladly the advice and counsel of the medical members of the board of health and constantly support public opinion in favor of reliance upon the family physician.

600 W. 168th St.,
N. Y. 32, N. Y.

THE 1947 ANNUAL MEETING

The 1947 Annual Meeting of the Illinois State Medical Society will be held at the Palmer House, Chicago, on May 12-14, 1947. The meeting this year will begin Monday morning, May12, and will run three full days, ending Wednesday evening at 5:00 o'clock. The change from the opening on Tuesday to Monday was made primarily to suit the convenience of the hotel and thus making many more rooms available for members and guests than would have been the case for a meeting beginning as in previous years on Tuesday.

The committe on Scientific Work at a recent meeting decided to hold joint sessions with all scientific sections participating and to arrange a schedule of scientific addresses which would carry the greatest appeal to the membership as a whole. The individual sections may hold a single half-day session, if it is desired, and most likely each of the sections will have this special meeting during the session.

The programs are being arranged by an executive committee consisting of Theodore Van Dellen, chairman, Harry A. Oberhelman, vice-chairman, Harold Miller, Secretary, and John F. Sheehan, Assistant Secretary. These men are

delegated the responsibility of arranging the schedule for each session to be held in the Palmer House Grand Ball Room. There will be a break of perhaps 30 minutes of each half day so that the members and guests may view the exhibits, both technical and scientific.

As per the usual custom, the large Exhibition Hall at the Palmer House will have the large display of technical exhibits, while the scientific exhibits will be displayed in the Red Lacquer Room, under the guidance of John A. Mart, Director of Exhibits. As has been the case in recent years, awards will be presented for the best scientific exhibits of the two designated classes and more will be said about these exhibits in an early issue of the Illinois Medical Journal.

There will be a number of outstanding invited guests to appear before the joint sessions throughout the meeting, and the orations in Medicine and in Surgery will be delivered by guest speakers, these to be announced in the near future.

The local Committee on Arrangements, under the chairmanship of H. Kenneth Scatliff, and with R. C. Oldfield as vice-chairman, are making the local arrangements for the meeting in the best possible manner, satisfactory to all.

The April issue of the Illinois Medical Journal will carry the program for the meeting, and as usual, the official programs will be printed and distributed to all registrants at the annual meeting. The two meetings of the House of Delegates will be held on Monday afternoon, and on Wednesday morning, and all delegates reported in advance of the meeting will be properly notified of this arrangement, and will receive a copy of the hand book for delegates by mail before the meeting, as has been the case in recent years.

Technical exhibitors are being selected carefully, and there will be more of these fine exhibits at the 1947 annual meeting than ever before, as more exhibit space has been made available for this meeting.

All of those responsible for the arrangements and conducting of the annual meeting are working in complete harmony to make this the best meeting of the Illinois State Medical Society that has ever been held, and it is hoped that the membership will mark the dates for the meeting on their calendar and plan to be present throughout the three day session.

HEALER OF THE SICK

The St. Louis area is the poorer by the death of Dr. George R. Hays of Marissa, Ill. Attending physician at the birth of 4700 babies, only doctor in Marissa during much of the war, "most useful citizen of his community," were among his honors. He died as an old-time physician would wish, in his car on his way home from one of the night calls he persisted in answering despite his 76 years and ill health.

Medicine has been "pensioning off" the general practitioner and country doctor in recent years, and he is fast disappearing. This is the specialist's era, and we appreciate him. But the general practitioner knows his patients as persons; includes a runaway son, poor crop and even a neighbor's new hat in his diagnosis; is both medical counselor and understanding adviser in matters that are on the domestic side.

He is a town figure who prefers to be paid for his services, of course, but money is secondary, and his is the last item on every home budget. He bring babies into this world and attends the aged as they pass into the sunset of life. He is acquainted with the aches and pains and miseries of assorted patients and prescribes for them all, and with good results. Not for him the specialist's role of restricted concentration on certain portions of the anatomy. He knows it all from scalp to big toe, and has the right pills for everything.

We need the specialists, of course, but there is still room for the Dr. Hayses, those unsung heroes who never have a profound essay in the journal of Medicine, but without whom this world would be far unhappier. When a person needs him, there is nothing more reassuring than the sight of the family doctor, perhaps a bit stooped and his clothing a trifle rumpled, trudging up the walk with that little black grip in his hand. May his tribe never be extinguished.

ST. LOUIS GLOBE-DEMOCRAT, Dec. 10, 1946

It is particularly important that tuberculosis be eliminated among the people 15 to 44 years of age. This group constitutes our reservoir of population replenishment and is the source of our most vigorous labor supply. The continuation of a nation's vitality depends upon the health of its people. We must put an end to the costly neglect of known control methods and take up positively the offensive against a disease that kills the young, the hopeful, and the strong. Editorial, Pub. Health Rep., Oct. 4, 1946.

State Department of Public Health

TETANUS IMMUNIZATION

JEROME J. SIEVERS, M.D., CHIEF,
Division of Communicable Diseases

In a recent letter to the Journal of the American Medical Association, Dr. Ralph Spaeth of Chicago, called attention to the increasing evidence that 1500 units of tetanus antitoxin did not constitute a large enough dose for prophylactic purposes following an injury or burn. It was pointed out that although this dosage of tetanus antitoxin is still being taught in medical schools, that it is used routinely in emergency rooms of hospitals and that it has been sanctioned by the armed forces, nevertheless a number of cases and deaths from tetanus occur following its use.

According to Dr. Spaeth from 10,000 to 20,000 units of tetanus antitoxin should be routinely employed for prophylaxis against tetanus. He further recommends that manufacturers withdraw all 1500 unit size packages from circulation in order to insure that this size dose will not be relied upon.

The Illinois Department of Public Health has been distributing the 1500 unit size package of tetanus antitoxin for prophylactic use. Up to this time this dosage has been commonly accepted as satisfactory. Pending further study and discussion of this subject, the Department will continue to furnish tetanus antitoxin as heretofore. However, it is taking this opportunity of pointing out to all physicians and health officers, the increasing evidence that this dosage may not protect against tetanus. Furthermore, it is recommending that at least 3,000 units of antitoxin be employed in all injuries and burns where possible contamination with tetanus spores may have occurred.

TETANUS, ILLINOIS, CASES, DEATHS, FATALITY RATE

Year	Cases	Deaths	Fatality Rate
1930	82	75	91.0
1931	61	56	90.3
1932	59	37	62.7
1933	66	47	71.2
1934	63	59	93.6
1935	39	26	66.6
1936	56	46	82.1
1937	36	23	63.8
1938	37	24	64.8
1939	46	37	80.4
1940	42	28	66.6
1941	32	25	78.1
1942	38	28	73.6
1943	44	30	68.1
1944	30	20	66.6
1945	32	17*	53.1
1946**	21*	9*	42.9
Total	785	587	74.8

*Provisional figures.
**1946, January 1 — September 30.

From the table shown it can be seen that a sufficiently large number of deaths from tetanus occur in Illinois each year to warrant consideration of the use of *tetanus toxoid* to produce *active immunity* against the disease. A great many investigators have clearly established the capacity of tetanus toxoid to produce significant and presumably protective serum antitoxin levels in human beings. Among the more than 10,000,000 soldiers in the United States Army during World War II, there were only three known cases of tetanus in soldiers where immunization record showed that the full immunization schedule had been completed.

The indications for the employment of tetanus

toxoid may be summarized as follows: In allergic persons or those with known sensitivity to horse serum; in farmers, hostlers, veterinarians and others experiencing relatively frequent opportunity for contamination of wounds with tetanus spores; and by and large in children, among whom the incidence of infected wounds is high and many unnoticed infections may result in tetanus.

The best type of schedule of tetanus immunization might well be adopted from that of the United States Army: Primary immunization with two doses of alum-precipitated tetanus toxoid or three of fluid tetanus toxoid at intervals of one month or longer, followed by at least one recall dose six to twelve months later, and another recall dose after any injury of the sort that is known to involve the risk of tetanus infection.

FOOD POISONING

An out-of-State county close to the border of Illinois recently experienced an outbreak of food poisoning. There was nothing unique about this outbreak except that the circumstances surrounding it indicated quite well the value of reporting.

According to word from the health officer, a group of women met for a bridge luncheon at one of the local clubs. Creamed chicken was served and all save one or two ate heartily of this item. The bridge game which followed proceeded smoothly for an hour or so. With some degree of suddenness and much to the consternation of the group, the bidding and playing were soon interrupted by the occurrence of nausea and vomiting among the members. Needless to say, the event must have been a bit spectacular.

The health officer learned of this outbreak some hours later as it was reported over the radio. He launched an investigation the following morning. Fortunately the club's manager had placed in the refrigerator specimens of the food served the day previously. These were sent to the laboratory for the usual tests.

While consideration was given to all foods served at the luncheon and all persons who had anything to do with it, the probable cause of the outbreak was soon determined. As the story goes, the chicken had been boned the night before and was permitted to remain overnight without refrigeration. General inspection of the person who prepared the chicken revealed no skin infection until the nails were examined. Here were found several acute paronychia. The girl gave the history of having elevated the edge of the nail in order to permit the pus to escape shortly before preparing the chicken. In all probability, as concluded by the health officer, the chicken was contaminated with staphylococci during the boning process. Lack of refrigeration permitted growth of the bacteria and subsequent development of the offending staphylotoxin.

At the time of this writing, laboratory tests of the food were not completed but the indications up to that time supported the tentative conclusion of the health officer.

The interesting feature of this experience is the spectacular onset of symptoms. If these women had left the club shortly after lunch and had separated, nausea and vomiting would have been an individual rather than a group experience. Undoubtedly many of them would have attributed their illness to "something I ate" and passed it off. Others would have called their physician. Any one physician might have seen at the most only one or two cases, particularly in a large community. This would be nothing unusual in a physician's life. Consequently it is quite possible that this outbreak would have escaped notice, especially if the physicians were not in the habit of reporting cases of food poisoning to the health department.

In all probability, food poisoning is more common than we think. Because of the oftentimes mild symptoms or the short duration of illness, much of it fails to come to the attention of the physician. Those seen are, in most instances, isolated cases. There is little opportunity for the private practitioner to appreciate the extent of any outbreak which these individual cases may represent.

It is for this reason that food poisoning in Illinois and elsewhere is a reportable disease. Prompt reporting will enable the local health department to initiate an early investigation and in most cases determine the cause. Elimination of that cause is the only means of preventing additional cases. Furthermore, such investigations permit the opportunity of teaching tech-

(*Continued on page* 101)

Correspondence

U. S. PUBLIC HEALTH SERVICE EXAMINATIONS

Competitive examinations will be held early in 1947 for appointment to the Regular Corps of the United States Public Health Service, according to a recent announcement by Dr. Thomas Parran, Surgeon General. Seventy-five vacancies exist in grades of Assistant and Senior Assistant Scientist.

Written examinations, covering each candidate's particular field of science, as well as related fields, will be held April 14 and 15 at places mutually convenient to the applicant and the Service. Oral examinations will be held during the period February 13-April 9 in thirty cities, strategically located throughout the United States. In Illinois this will be at Marine Hospital, 4141 Clarendon Ave., Chicago, March 18 and 19.

Commissions are available to scientists trained in any of the following fields: bacteriology, mycology, parasitology, entomology, malacology, biology, chemistry, physiology, physics, statistics (mathematical, demographic, etc.), psychologists, and milk and food specialists. Assignments will be in line with the individual's demonstrated ability and experience.

An applicant for the grade of Assistant Scientist must be a citizen of the United States, have seven years of educational and professional training or experience, possess a certificate or diploma from an institution of recognized standing, and be able to pass a physical examination given by a medical officer of the United States Public Health Service. The same requirements, plus an additional four years of training or experience, apply to those seeking the grade of Senior Assistant Scientist.

Commissioned Officers in the Regular Corps enjoy the same benefits and privileges as do officers of the Army, Navy, or Marine Corps. The grade of Assistant Scientists is equal to that of First Lieutenant in the Army. Annual pay, with allowances for dependents, is $3,811. A Senior Assistant Scientist ranks with a Captain of the Army and draws, with allowances for dependents, $4,351 a year.

United States Public Health Service Officers are entitled to full medical care and hospitalization for themselves and their families, including disability retirement at three-fourths base pay. They receive thirty days annual leave with pay. Periodic promotions are based upon length of service and merit. The retirement age is 64.

Application forms and additional information may be obtained by writing the Surgeon General, United States Public Health Service, Washington 25, D. C.

WHERE WE STAND IN MEDICINE

The Institute of Medicine of Chicago, 86 East Randolph Street, is sponsoring a series of lectures under the general title "Where We Stand Today in Medicine". These are presentations by Fellows of the Institute of Medicine on recent contributions and current thought in the basic sciences and in the various branches of clinical medicine, arranged by the Committee on Postgraduate Activities.

The meetings are held on the 2nd and 4th Friday afternoons of each month, promptly from 4:45 to 5:30 o'clock in the Assembly Room of

the Institute. They are open without fee to all physicians and allied professional groups. A question period after the presentations will be conducted at the discretion of the individual speakers.

February 14: "Clinical Application of Sternal Puncture", Louis R. Limarzi, Assistant Professor of Medicine, University of Illinois College of Medicine.

February 28: "Diseases Characterized by Enlargement of the Lymph Nodes: Diagnosis and Treatment", Raphael Isaacs, Director, Department of Experimental Hematology, Michael Reese Hospital.

March 14: "Nerve Regeneration", Paul A. Weiss, Professor of Zoology, The University of Chicago.

March 28: "Ulcerative Colitis", Walter L. Palmer, Professor of Medicine, The University of Chicago.

April 11: "Physiology of Bone", Franklin C. McLean, Professor of Pathological Physiology, The University of Chicago.

April 25: "Emotional Problems of Elderly People", Maxwell Gitelson, Attending Psychiatrist, Michael Reese Hospital.

May 9: "Mental Hygiene and Social Discipline", Richard L. Jenkins, Psychiatrist, Health Service, University of Illinois, Clinical Associate Professor of Psychiatry, University of Illinois College of Medicine.

May 23: "The Newer Surgery of the Spleen", George M. Curtis, Professor of Surgery, Chairman, Department of Research Surgery, Ohio State University College of Medicine.

Opportunity will be afforded on intervening Fridays for presentations by visiting authorities.

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46 FROM ILLINOIS RECEIVE FELLOWSHIP IN COLLEGE OF SURGEONS

The following list of Illinois physicians were received into fellowship in The American College of Surgeons at the convocation held December 20 during The Clinical Congress in Cleveland.

Trinidad B. Afable ..... Chicago
Stanley D. Anderson ..... Grayslake
Henry F. Berchtold ..... Springfield
Berget H. Blocksom, Jr. ..... Rockford
Jack E. Brooks ..... Chicago
Edmund Crowley ..... Chicago
Maurice J. Drell ..... Chicago
Harold Earnheart ..... Wilmette
Clifford W. Emons ..... Alton
Lewis S. Ent ..... Cairo
Joseph E. Fields ..... Joliet
Morris T. Friedell ..... Chicago
Kilian F. Fritsch ..... East St. Louis
J. Major Greene ..... Chicago
William V. Haskins ..... LaSalle
George F. Hibbert ..... Chicago
Carl Ireneus, Jr. ..... Chicago
Herman A. Jacobson ..... Chicago
Felix Jansey ..... Maywood
Frank F. Kanthak ..... Chicago
Graham A. Kernwein ..... Chicago
Robert B. Lynn ..... Alton
Herbert L. Michel ..... Chicago
Harry E. Mock, Jr. ..... Chicago
Clarence W. Monroe ..... Oak Park
Mary Louise Newman ..... Jacksonville
Francis J. Phillips ..... Chicago
John F. Poser ..... Chicago
Alfred Rasmussen ..... Chicago
Richard A. Rasmussen ..... Chicago
William H. Requarth ..... Chicago
Harvard L. Romence ..... Springfield
Bernard G. Sarnat ..... Chicago
Francis E. Sauer ..... Rockford
William J. Schnute ..... Chicago
Danely P. Slaughter ..... Chicago
Kurt Springer ..... Kankakee
Hack U. Stephenson, Jr. ..... Oak Park
Clifford P. Sullivan ..... Chicago
William B. Sullivan ..... Chicago
Robert M. Sutton ..... Peoria
Joseph B. Teton ..... Chicago
Maurice R. Williamson ..... Alton
Francis D. Wolfe ..... Chicago
Simon L. Wolters ..... Chicago
Worling R. Young ..... Geneseo

OPHTHALMOLOGISTS PLEASE NOTE

A directory of all diplomates to January 1, 1947, will be published soon.

This directory will be arranged alphabetically and geographically. No biographical material will be included.

Every effort will be made to make this directory accurate and diplomates who have not already done so should notify the Board office at once stating their name and address exactly as they wish them listed.

Price is $3.00 postpaid.

NOTE: Diplomates are requested to keep the Board office informed of all changes of address so that the files may be kept up-to-date.

Officers for 1947.—Drs. Goar, Chairman;

Theobald, Vice Chairman; Beach, Secretary-Treasurer.

1947 *Examinations*:—Atlantic City, June 8-13; Philadelphia, June 13-16; Chicago, week of October 8.

LOYOLA ALUMNI LUNCHEON MAY 13TH AT PALMER HOUSE

The alumni of the Loyla University School of Medicine will renew their annual meeting during the Illinois State Medical Society meeting at the Palmer House in May. The date for the alumni luncheon will be May 13th.

Doctor Francis J. Gerty, head of the department of neuropsychiatry at the University of Illinois School of Medicine, is president of the association; Doctor Robert E. Lee of Chicago is president-elect, and Doctor George A. Hellmuth is secretary-treasurer. The executive secretary of the association is Reverend G. G. Grant, S. J. Last year 125 alumni were present at this meeting.

INTERNATIONAL COLLEGE OF SURGEONS

The Twelfth Assembly of the United States Chapter, International College of Surgeons will be held in Chicago, September 29-30-October 1-2, 1947, at the Palmer House.

The Thirteenth Assembly is scheduled for Kiel Auditorium, St. Louis, Missouri, November 16-17-18-19, 1948.

We are sending you this information so that in planning your scientific programs, a conflict of dates may be avoided, if at all possible.

UROLOGY AWARD

The American Urological Association offers an annual award 'not to exceed $500' for an essay (or essays) on the result of some clinical or laboratory research in Urology. Competition shall be limited to urologists who have been in such specific practice for not more than five years and to residents in urology in recognized hospitals.

For full particulars write the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee. Essays must be in his hands before May 1, 1947.

The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Hotel Statler, Buffalo, New York, June 30-July 3, 1947".

THIRD BASIC SCIENCE COURSE STARTS AT U. OF I. IN OCTOBER

January 1 marked the beginning of the second nine-month basic science course in the University of Illinois College of Medicine.

At the same time, 20 physicians completed the first course which began last April 1.

"The course is designed to review the basic sciences and coordinate them with clincial medicine," Dr. George Milles, coordinator of the course said.

It is another in a series of professional post-graduate courses designed primarily, but not exclusively, to meet the needs of medical officers returned from service in the armed forces.

The first six months is devoted to broad general coverage of the basic sciences. The last three months deals with individual specialties.

Content of the course meets all medical specialty board requirements, Dr. Milles noted. For board examination purposes, it is equivalent to a year of residency.

All 20 of the first group of post-graduate students and the enlarged enrollment of 32 for the second course are veterans.

In addition to helping to meet the immediate need of young veterans, the long-range objective of the course is to assist physicians generally in preparing for specialty board examinations.

Beginning with the third course in October 1947, one group of students will be enrolled and graduated each academic year.

Original Articles

THE POSITIVE SEROLOGICAL REACTION IS NOT A DIAGNOSIS OF SYPHILIS.

JOHN R. PORTER, M.D.
ROCKFORD

It has been conservatively estimated that in the United States there are thousands of nonsyphilitics being treated for syphilis. This is appalling when it is considered that the treatment is expensive, not without danger, and requires a considerable length of time to be adequately carried out; not considering the more important mental reactions of the patient who has been told that he has syphilis on the sole symptom of a positive blood test. Think of the heartaches, shame, worries, and tendency to withdraw from his usual associates a middle aged man will go through when he has been told that he has syphilis because of a chance positive blood test taken in a routine manner and with no thought of syphilis.

There is no serological test that is specific for syphilis. The orginators and developers of the tests in common use to-day cannot tell you exactly for what they are testing. There is probably a change in the chemistry of the blood serum proteins, but what that change is or what causes it is not known. In fact the limitations of our present knowledge of the protein molecule form are barriers to knowledge of what takes place in the serological reaction. Nothing in any of the usual tests is specific for infection by the treponema pallidum and no reagent used in any of these tests contains the treponema or its metabolic products. How different from the specific tests such as the Widal reaction for typhoid fever, the Schick test for diphtheria susceptibility, or the Mantoux reaction for evidence of a tubercular infection at some time during the patient's life. In these latter tests the specific organisms or their metabolic products are used as the antigens and a great deal of reliance may be placed on them for specific diagnoses. This is not true with the flocculation, the precipitin or the complement fixation tests for syphilis. They all use antigens made from powdered beef heart and most are heavily fortified with cholesterol to make them more sensitive. Most syphilitics react to them but so do many other disturbances of the serum protein chemistry, some of which are known and many that are unknown. It is my belief that if bloods were drawn every day from all of us we all would show a positive reaction sooner or later. And that nearly a hundred percent would, within five years, have a condition to cause a serum protein change that would react positive to the standard tests.

The sponsors of the various tests have been endeavoring to work out verification tests to separate the true syphilitic from the false positive reactions. So far, none have succeeded in clearing the situation and, in fact, they may have clouded it to an undesirable degree.

Then of what use are these tests? In the first place they are the best tests that we have and will have to be used until something better has been developed. When used with the complete understanding of their limitations they are of great aid in making a diagnosis. Group testing, such as the industrial examinations, the marriage tests, the hospital routine examinations, etc. will point out which individual should be further

studied. The reactions are not diagnostic but very few persons who have untreated syphilis of over six weeks duration will escape having positive reactions when the extra sensitive antigens of the present day are used. So, with very few exceptions, negative reactions, where there has been no treatment and when over six weeks have elapsed since a possible exposure, can be reliably taken to mean that the individual does not have syphilis. Where there is any question about a negative reaction repeat tests should be made at two to three week intervals. Not so reliable are the positive reactions. The positive test, itself, is not diagnostic of syphilis.

The individual with a positive test alone is entitled to as careful and painstaking investigation and examination as any medical or surgical patient who might receive any dangerous treatment. The laboratory — except for the positive dark field examination — cannot make a diagnosis of syphilis for you. The serologists will be the first to agree with me on this statement. You will have to work as hard or harder on a suspected case of asymptomatic latent syphilis to make a diagnosis as you will on any other condition in the entire medical field. If you do not care to make the effort or do not think that you have the experience send the patient to some one that will give him a break. Under no circumstances should treatment be started until an accurate diagnosis of syphilis has been made. If treatment is once started you prevent the making of an accurate diagnosis. How would you like to go through the remaining years of your life with that doubt of whether you do or do not have syphilis on your mind? I'll say that you wouldn't. Neither would your patient.

In the second place the tests are of value in following the course of treatment. This is especially true if they are titrated so that you will know if the disturbance in the patient's blood serum caused by the treponema is abating as the treatment becomes effective. Even in this instance disturbing conflicts appear as a new and more sensitive antigen may be used in a later test causing a jump in the titre which wouldn't have happened if the old antigen had been used.

In the course of my work in a veneral disease clinic, as a member of a Selective Service Medical Advisory Board, and in my office I have seen many false positive serological reactions. Stokes[1] and his colleagues found, with a selected group (those suspecting syphilis and those having had treatment eliminated themselves) presenting themselves as blood donors for the Red Cross, that 489 had positive reactions out of 210,261 possible donors. 98 of these were carefully studied for three months or more and only 40.5% were diagnosed syphilis. Just think, in this selected group about 60% of the positive reactions were false. What about the routine tests that are made in your practice when syphilis is not suspected and which are found positive? They certainly should be completely investigated.

I have examined 98 dischargees from the armed forces who had positive serological reactions at their separation examinations. Five of these were finally diagnosed as having syphilis and from histories and examinations they were judged to have congenital syphilis. Yet in all previous examinations they had been negative. 93 or 94.9% were decided to be free from syphilis. By continued monthly tests they all became negative and remained negative without treatment. In my experience nothing but time and continued testing without treatment will find the false positives. Most false positive reactions will become negative within a month. A few will take two or three months depending on the cause of the chemical changes in their serum proteins and I have followed one ex-soldier who had malaria and many inoculations for six months before he presented a negative serum reaction.

If your patient with a positive blood test has early syphilis you will find the lesions of early syphilis on examination and get a history of exposure within the usual time limits. If he has the complications of latent syphilis a careful and complete examination will find the complications. In either case you can and should start the appropriate treatment at once. However, if he is one of the great majority of positive reactors found on routine testing who has an asymptomatic latent syphilis he will require continued study before you can arrive at an accurate diagnosis. Here it matters not how early you start treatment, and in many cases of long standing infections it is questionable whether he should be treated at all. So take your time and make an accurate diagnosis. If he needs treat-

ment it can be decided upon after the diagnosis of syphilis has been made.

I give a list of conditions which I have found to be the causes of false positive serological reactions. It is by no means complete but it will give you an idea of what to look for. They are listed more or less in the order of their frequency in my experience:

1. Malaria. This is a frequent cause of false reactions and I see them in the follow-ups of service dischargees.
2. Protective inoculations.
   a. Injections for virus influenza protection. Most of the service men from over-seas received these injections just before boarding ship to come home. They, at times, caused disagreeable reactions.
   b. Small pox vaccinations.
   c. Injections for typhus, typhoid and other protection.

   In the army where multiple inoculations were given in a short time as many as 18% had positive serum reactions when the bloods were drawn shortly after the inoculations were completed.
3. Upper respiratory infections. This may be anything from a slight cold to lobar pneumonia or active tuberculosis.
4. Pregnancy. The metabolic changes in the mother due to pregnancy may at times cause a positive serum reaction. I have treated three cases who had negative reactions early in their pregnancies and who became positive in the later months. None had signs of an early syphilis. I was very reluctant to treat these patients but the law requires it and I didn't care to be responsible for a syphilitic baby. There wasn't time to see if they were false positives. None of them received over seven injections of an arsenical, not enough to have cured them, yet all three became negative right after delivery (one on the next day) and all babies were perfectly normal. Their titres remained constant during the entire treatment period right up to delivery yet all were negative within two weeks after and remained negative without further treatment.
5. Injuries and burns where there is a destruction of tissues.
6. Most anything that will cause a fever.
7. For no apparent reason at all.

Cleveland J. White and his associates in the Dermatological Department of Loyola University School of Medicine[2] became concerned over the number of false positive reactions that they encountered in conjunction with various dermatological conditions. They did something about it. They prepared an exhibit showing the possibilities of the false positive reactions and have shown it at a number of medical meetings. This was very instructive and it reached a large number of doctors. I hope that they took home with them the warning to "Stop, Look, and Investigate" any positive serological reaction obtained on a routine examination and where syphilis was not suspected before they started treatment on the sole symptom of the positive blood test.

Who is at fault that a very large proportion of the medical profession accepts the laboratory report of a positive serological reaction as being diagnostic of syphilis? Is it the medical schools because of the insufficient instruction in the diagnosis of syphilis? P. S. Pelouze[3] in a survey of the medical schools of the country during the war years found two or three Class A schools which admitted that the current graduating classes had not received one hour of instruction in the diagnosis and treatment of gonorrhea. Practically none had a desirable course. Is the other major venereal disease slighted in a like manner?

Is the Public Health Service at fault by corraling all of the reported active cases of syphilis into the Intensive Treatment Centers, thus removing from the medical schools the desirable material for instruction? Or is it the insistance of the public health departments of the various cities and states on the immediate treatment of all individuals with positive blood tests found in their laboratories?

John H. Stokes[4] answers the above questions as follows: "I don't think that the fault in the biologic false positive situation lies anywhere in particular. It is just part of the inevitable deficiencies as well as the inevitable progress of human knowledge, and I think we can afford to feel rather glad that the situation is being corrected than too greatly disturbed over the people who have unfortunately been treated without cause. I remember a story that was told us in the old days in medical school, which you may have heard, to the effect that after Simms in-

troduced ovariotomy there were literally platters full of ovaries rather sickening described as oysters, passed around the tiers of visitors at the operating rooms of Gynecologists and Surgeons. It's discouraging to think that we have to go through such a stage to reach anywhere in knowledge, but apparently we do."

The wheels of progress in human knowledge grind slowly. Perhaps we should be thankful that they grind at all. If this communication will do one small bit in speeding those wheels I shall be satisfied.

SUMMARY

1. The positive serological reaction for syphilis can be and often is a false biological reaction.

2. There is nothing specific for syphilis in any of the various serological reactions now in use.

3. Syphilis in most every instance gives a positive reaction so the negative reaction is of help in ruling out syphilis.

4. Many conditions other than syphilis will, at times, give a positive reaction.

5. Nothing but time and repeated testing will prove a false reaction in the face of a positive serological reaction with no history of infection and no other signs and symptoms.

6. Every patient with a positive serological reaction and no other obvious signs or symptoms is entitled to as careful examination and investigation as in any other condition in the entire medical field.

7. Do not start treatment for syphilis until an accurate diagnosis has been made on other evidence than the positive serological reaction alone.

8. "Stop, Look, and Investigate" before syphilitic treatment is started.

206 W. State St.

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3. Personal discussion with author.
4. Personal communication to the author.

As mass radiography reaches a greater number of the public, it will be imperative for general hospitals to provide part of the additional beds required to hospitalize the newly discovered tuberculosis patients, because existing facilities in special sanatoria will be inadequate. Hospital Survey News Letter, Feb., 1946.

REFRIGERATION IN SURGERY OF THE EXTREMITIES

WILLIAM J. PICKETT, M.D., F.A.C.S.
CHICAGO

Allen in 1941 was impressed by the fact that gangrene of an extremity was hastened by application of heat, and delayed by the application of cold. Lowered temperatures diminish oxygen consumption in the tissues and inhibit cellular damage from oxygen want.

Stafford and Nathanson[1] studied, (1.) the optimum temperatures desired for refrigeration, (2.) the duration of temperatures required for anesthesia, and (3.) the minimum temperatures allowable to avoid damage to tissue cells. This was found to be (1.) 57° F. to the toes, 36-38° F. of the calf while the deep temperatures were found to be somewhat higher. (2.) Three hours duration was found to be the average time required. However this was somewhat determined by the size of the limb. A finger could be anesthetisized in fifteen minutes. (3.) It was observed that a temperature of 40° or below will produce frost bite if the extremity is too rapidly returned to room temperature.

Ebin[2] has shown that the inferior vena cava of the cat can survive a temperature of -70° F. Spermatazoa may survice a temperature of -260°. The tissues of a mastodon unearthed in Siberia after thousands of years could be eaten by dogs. Bacteria have been frozen in liquid helium at -450° F., yeast cells at -300° F. without apparent injury.

From our present knowledge, unicellular organisms may survive extremely low temperatures, but the cellular architecture of higher forms of life would suffer permanent damage.[3] An irreversible cellular necrosis results from one or a combination of both; destruction of cellular architecture, or a concentration of sodium chloride, disturbing osmotic pressure and the interchange of oxygen.

Ottoway and Foote[4] in the U. S. Naval Bulletin report a case of refrigeration of wounded extremities in which the femoral artery was severed above the knee. On the twenty-sixth day a line of demarcation became evident below the knee, and amputation above the knee was done on the twenty-ninth day.

Miyakawa in the American Journal of Surgery reports nine cases and concludes that refrigera-

tion of a crushed extremity allows a delayed operation, and what was an emergency becomes an elective procedure.

Kirz[5] in the British Medical Journal reports a case of gas gangrene following refrigeration due to contaminated ice. Another author reports a severely infected leg kept under refrigeration for eighty-nine days.

In our experience of ten cases at the Cook County Hospital we were struck, as are all others, with the beneficial effect of refrigeration on the patient. We have seen patients in diabetic coma and suffering from sepsis, improve remarkably in twenty-four hours. Sepsis is readily controlled, blood sugar is managed, and cardiac complications may be given the medication indicated. In other words what was to be a desperate emergency operation can now be an elective procedure carried out at the most desirable time.

Refrigeration controls the activity of saphrophytic bacteria, which does away with all odor and the need for frequent messy dressings. The patient is usually cheerful and looks forward to the trip to the operating room.

It is our practice to allow from a few days to a week of refrigeration before surgery. This allows more thorough preparation of the patient, some time for collateral circulation to develop at this site of the stump, and it allows the general circulation to adjust itself to the loss of the extremity.

Our method consists of applying the tourniquet at the upper limits of the gangrenous area or just below the knee. A section of rubber sheeting is placed beneath the leg and the leg covered with ice cubes or cracked ice. The sheeting is wrapped around the leg and the whole encased in two woolen blankets. The head of the bed is slightly elevated to allow the melting ice to run into a receptacle at the foot of the bed. The ice may be replenished as needed every four to six hours.

If refrigeration anaesthesia is to be employed in preference to another type of anaesthesia, a second tourniquet is applied just above the knee, and that part refrigerated for three hours before operation. This allows better healing of the stump.

SUMMARY

Ten cases of gangrene of the extremity were treated by refrigeration. Two cases died from shock and sepsis within twenty-four hours following operation. One case died two months later of bronchopneumonia and auricular fibrillation.

CONCLUSIONS

Refrigeration is an effective and advantageous procedure in the management of gangrene of the extremities. It is a simple procedure and does not require any unusual equipment.

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STAPHYLOCOCCUS PNEUMONIA IN CHILDREN

Roentgen Aspects

W. E. ANSPACH M.D.

CHICAGO

Two fairly recent discoveries direct our interest with greater intensity toward pulmonary lesions where the staphylococcus is the sole invader, or predominates as an infective agent. (1) The prevalence of this disease as a complication, or as an almost constant associated finding of microscopic cysts of the pancreas in young children, following symptoms of pancreatic deficiency and (2) the opportunities that penicillin might offer in holding this infection in check. The latter has attracted widely the attention of the medical profession as a whole, and because of the prevalence of staphylococcus infection in children, the pediatrician, in particular. While it is too early to draw final conclusions it seems that penicillin will be unable to prevent a high mortality in patients with pancreatic fibrosis. Staphylococcus has always been a dreaded organism where the lung was invaded because of its necrotizing effect on the tissues, leaving an unusually high mortality. It has a reputation as a primary, as well as a secondary invader. The staphylococcus accounts for the thick puss and ultimately fine abscesses, associated with a prolonged sojourn of a foreign body, and the wide spread, fine, ill defined shadows of the blood born staphylococcus throughout both lungs. These are of frequent

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occurance and call for only slight emphasis at this time. The most common lesion is that caused by invasion of the lung by way of the bronchial tree. The lining membranes of the bronchi are first involved and then adjacent tissue. The bronchogenic nature of the process is usually portrayed nicely on serial roentgenograms and, when fully understood, often affords an opportunity to render real assistance in making the diagnosis. The full significance of a highly destructive agent in the bronchial tree with all its mechanical consequences must be recalled when examining roentgenograms of young children.

As a secondary invader the staphylococcus has long played a prominent role. During the influenzial pandemic of 1889, and earlier, a number of writers (1) had observed the typical necrosis of bronchi and alveolar structures or "splenization" of the lung. In this epidemic of "Le Grippe" there were also multiple abscesses characteristic of staphylococcus of the lung. During the pandemic of 1918, the staphylococcus was not an important causative organism in any significant portion of the complicating pneumonias with only a few exceptions — notably those occuring at Camp Jackson, as reported by Chickering and Park. Cultures made from lungs of 312 fatal cases revealed staphylococcus as the only or predominant organism in 153 instances. The disease here was often fulminating, but often of long enough duration to allow for the formation of innumerable abscesses in the lung. A report from No. 3 Canadian General Hospital indicated that the Staphylococcus was next in importance only to the influenza bacillis. The staphylococcus (mostly aureus) was found as the only or predominating organism in 14 as compared with 30 in which the influenza bacilli were obtained. At the Military Hospital in Malta, the staphylococcus was predominant in 7 of 9 fatal cases. In contrast to the usual experience, necrotization and abscess formation have been noted in epidemics in the absence of the staphylococcus. One must conclude that certain conditions within the lung invite the staphylococcus to take hold rather than the staphylococcus possessing high epidemic qualifications. The recognition of small abscesses, excepting in a fulminating influenzal infection should arouse suspicion of the presence of staphylococcus in the absence of an existing epidemic and favor its diagnosis. In nearly all acute cases which show multiple foci of infection with numerous small peribronchial abscesses, the staphylococcus has been the offending organism.

Fibrocystic Disease of the Pancreas. — Chronic cystic fibrosis of the pancreas as a disease entity has occupied a prominent place in pediatric literature for the past eight years. We are especially interested in it because of the high percentage of staphylococcus infections of the lung which develop in these patients often as a terminal process. The recognition of this disease was delayed because the pancreas grossly appeared normal and was not examined microscopically. Consequently the presence of inspissated secretions in the acini and ducts and atrophy of the parenchyma of the pancreas was not discovered. Clinically, our interest centers about the child because of frequent upper respiratory infections, inability to gain weight and frequently, large foul smelling stools containing large quantities of fat. There are frequently episodes of diarrhea which are characterized by not being foamy or watery. If pulmonary symptoms develop early in life, the foul stools may not be a dominant feature. Once the respiratory symptoms develop all attention is apt to be centered here, and the underlying disease process is likely to go unrecognized. At Children's Memorial Hospital, we have observed 33 cases which have come to necropsy and the diagnosis of this disease has been made in a number of patients still living. The latter are assumed to have the disease because of the absence of pancreatic trypsin and lipase in aspirated duodenal contents, a reduction in the vitamin A curve, and the associated clinical signs mentioned above.

All but two cases have shown changes on roentgenograms of the chest which are strikingly similar. In all but one of the necropsy group, staphylococcus aureus was found to be the only or predominating organism. This group of young children with fibrocystic disease differ in no particular way from the sporatic bronchogenic staphylococeal pneumonia excepting in the degree of involvement, that is, there is a greater tendency toward involvement of the whole lung.

Time and interest do not justify the presentation of individual histories and physical findings

of this fibrocystic group which have been widely discussed in recent literature.

All of the theories of origin of pancreatic fibrosis in children agree on abnormal secretions of pancreas. (Wolbach and Farber.[3]) Deficiency or insufficiency of the mucinase require for the making of mucus in a normal physical state — thick mucus which inspissates and leads to obstruction of the ducts and acini. Back of this is a possible autonomic imbalance which controls secretions of the pancreas and mucus glands. (Farber.[3])

The symptoms depend upon the extent of the infection. If the disease is fulminating, death may occur rapidly, often within a week or ten days. The temperature may reach 105° and the leukocyte count 40,000. In other cases which may be called the acute necrotizing type, symptoms may be similar but usually more time is required for the development of the peribronchial lesions, as noted on roentgenograms and there is less toxisity and recovery may occur. The symptoms of the chronic type is that of recurring bouts of fever with usually a constant low grade temperature elevation over long periods of time. In this group, where the staphylococcus was associated with pancreatic fibrosis, 33 of the 35 cases, the final diagnosis was made at necropsy.

There is frequently a pretussus-like cough or asthma like respirations. Thick mucus which is produced in the trachea and bronchi is expelled with great difficulty and accounts for these symptoms.

The X-ray Signs. — The x-ray signs in a bronchogenic staphylococcus infection of the lung is that expected in a fulminating tracheobronchitis. The hilar markings are markedly accentuated and the bronchi extending outward stand out prominently like rough irregular twigs. Small focal areas of consolidation are predominant about the bronchi and larger areas of pneumonic consolidation are often present farther out in the parenchyma. If the lungs are extentively involved there are signs of local or diffuse emphysema with the leaves of the diaphragm occupying low positions and the intercostal spaces widened. The mediastinal structures are slender as though squeezed by the over-expanded lungs. Alveolar, lobular, and lobar atelectasis are common wih the associated shift in the position of the diaphragm, ribs, and mediastinal structures. The ragged appearing bronci with distal irregular patches of soft tissue clouding and abscess formation have been the most charatceristic x-ray signs in our group, and aid in differentiating this disease from milder forms of tracheo-bronchitis, asthmatic bronchitis, Ayerza's disease and lipoid pneumonia. The roentgen picture resembles greatly cases seen following the aspiration of smoke in children near asphixation. Early reports supported a steadily progressive lesion in the lung, but we have seen areas with marked improvement while new lesions developed simultaneously elsewhere. A few older cases have almost cleared roentgenologically and have enjoyed satisfactory health. One clinical case has progressed nicely for three years. Recent Roentgenograms show only slight scarring at previously clouded zones in the lungs.

The blood borne type of staphylococcus pneumonia is that of miliary distribution of ill defined soft, or semi-discreet shadows scattered evenly throughout both lungs.[7] All of these have followed a severe skin infection, usually furuncles and all secumbed before abscess cavities could be seen on roentgenograms of the chest. X-ray signs which strongly suggest a staphylococcus infection cannot be said to be diagnostic, but often favor this diagnosis. The most common staphylococcus pneumonia is associated with fibrocystic disease of the pancreas and should arouse suspicion of that disease. In doubtful cases the other clinical manifestations of pancreatic disease should tip the scales toward the correct diagnosis. Hypomotility of the small intestines revealed by barium studies or gas and fluid in segmented loops of small bowel in the absence of acute abdominal symptoms are a point in favor of this disease. Intestinal obstruction shortly after birth likewise favors this disease because of prenatal changes in the stool (meconium ileus).

Bronchiectasis. — Any condition which holds a virulent organism in the bronchi for a long time is apt to be followed by bronchiectasis. The process which is often identified by the x-ray as evidence of atelectasis is common in staphylococcus infections of the lung of long duration. Destruction of the alveoli and damage of the bron-

chial walls occurs rapidly in the delicate tissues of young infants where this disease process predominates. Since in fibrocystic disease of the pancreas, the pulmonary changes are often fulminating until death, bronchiectasis is seldom demonstrated on chest roentgenograms as a network of fine shadows seen in older individuals who are maintaining a much better state of health. Bronchiectasis is more sporadically located throughout, and less likely to be limited to a lower lobe. The severe illness accompanying the fatal cases have commonly been found to have bronchiectasis at the necropsy table.

The pathology in our cases corresponded to those observed by Farber. The lungs of patients living for more than a few months after birth were invariably diseased. Hyperexpansion of the lungs, most prominent anteriorly at the time of autopsy, was the usual finding and this was the result of partial obstruction in the trachea, bronchi, and bronchioles caused by thick tenacious mucoid and mucopurulent exudate. The process in the lungs was characterized usually by bronchiectatic and bronchiolectatic abscesses, thickening of bronchiolar walls and varying amounts of Bronchopneumonia. Either emphysema or obstructive atelectasis was present. When the process was of long duration, considerable fibrosis of the lung was found and a chronic interstitial form of Bornchopneumonia was superimposed upon the original process. There was distention of the mucous glands and the bronchi were filled with inspissated material.

SUMMARY

The roentgenograms of 40 young children with staphylococcus pneumonia have been presented and briefly discussed, two varieties are recognized:

1. Blood-borne, following skin infection with a rapid exudus.

2. Bronchogenic which often is a complication of foreign material in the lung, follows other pulmonary diseases such as influenza, or follows sooner or later, the less restistent bronchial mucosa and the presence of thick secretions in fibrocystic disease of the pancreas. The latter is the most fatal and the most common and accounts for many of the deaths in a Childrens' Hospital. Chest roentgenograms follow a strikingly similar pattern and their recognition often will lead to further analysis and the correct diagnosis.

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MARKED HYPERPROTEINEMIA IN SUBACUTE BACTERIAL ENDOCARDITIS

(And simultaneous Hyperthyroidism and Subacute Bacterial Endocarditis)

LEONARD CARDON, M.D.,
DONALD ATLAS, M.D.,
and
REGINA GREENEBAUM, M.D.
CHICAGO

Elevation of the serum globulin occurs frequently in subacute bacterial endocarditis.[1] It is usually accompanied by concomitant lowering of the serum albumin so that the total protein remains approximately normal. In our patient the total protein reached 12.1 gm. per hundred cc., a level far higher than the normal 6.5 to 8 gm. This large increase came from the globulin whose value was 7.77 gm. in contrast to the normal of 2.5 to 3 gm. The serum albumin of 4.33 gm. was well within the limits of normality. The albumin-globulin ratio, normally 1.13 to 1.72, dropped to 0.55 in this patient.

Report of Case

H. P., a 55 year old Jewish male, complained of cough, weakness, sweating, occasional palpitation and tightness in the chest for the past six months when he entered Mt. Sinai Hospital, September 7, 1939. He had lost 25 pounds in the preceding four weeks. Auricular fibrillation developed shortly before his hospitalization. Twenty-five years earlier he had been told that he had a "bad heart". He was confined to

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bed at that time although he had no symptoms of cardiac failure. On physical examination, a bruit was heard over the nodular right lobe of the thyroid gland. Systolic and diastolic murmurs were audible at both the apex and the base of the heart. The blood pressure was 110/80. Auricular fibrillation was present without evidence of congestive failure. An occasional red blood cell was found in the urine whose specific gravity was 1.030. The blood non-protein nitrogen, urea nitrogen, creatinine and Kahn tests were normal. Except for a reduction in hemoglobin to 72%, the hematological examination was normal.

Sinus rhythm was re-established after treatment with quinidine sulphate for two days, and auricular fibrillation never recurred. Occasionally the patient's temperature reached 101, but after the administration of Lugol's solution, no fever occurred. One week after the entrance, the patient suddenly became mentally dull, had impairment of muscular coordination, slurred speech and slight weakness of the left side of the face. These symptoms disappeared in a few days. The spinal fluid was clear, the cell count normal, the Pandy reaction one plus, the Wassermann test negative, and the colloidal gold 3322110000.

The basal metabolic rate ranged between plus 33% and plus 43% in repeated tests between September 9 and September 23, 1939. During this period, although the patient remained at complete bed rest and consumed a high caloric diet, his weight dropped from 109 to 101 pounds. After three weeks of medication with Lugol's solution the thyroid gland became large and firm, the basal metabolic rate dropped to plus 18% and his weight increased to 120 pounds. This favorable response to Lugol's solution confirmed the diagnosis of hyperthyroidism. The thyroid gland, excised by Dr. H. M. Richter, October 10, 1939, was described by the pathologist as a "colloid goitre with areas of hypertrophy and hyperplasia." After the operation the patient's weight rose to 134 pounds and the basal metabolic rate dropped to minus 7%.

March 1, 1940 the patient returned to the hospital with the same cardiorespiratory complaints he had on the first admission. In addition, he was bothered by abdominal pain, distention and belching after meals, enlargement of the abdomen and swelling and rash on the legs. His abdomen was protuberant, the liver was 6 cm. below the costal arch, splenic dullness was increased, a profuse purpuric rash was present on both lower extremities, one purpuric spot was seen in the pharynx, moderate pitting edema of the ankles and some clubbing of the fingers was present. Albumin and a few red blood cells were now persistently found in the urine. The hemoglobin dropped to 50%, the red cell count to 3,200,000, while the white and differential count remained normal. The non-protein nitrogen rose to 62 mg. per hundred cc. and the urea nitrogen to 34 mg. The creatinine was normal. Blood cultures were repeatedly negative.

Hyperproteinemia and hyperglobulinemia were first observed March 8, 1940. The total blood protein was 10.9 gm. per hundred cc., with 4.7 gm. albumin and 6.2 gm. globulin. Subsequent determinations of the blood proteins and associated tests are shown in Table I. The total protein and globulin values fluctuated considerably but were persistently high, while the albumin remained approximately constant. The A/G ratio was reversed throughout the eight months of observation. The two diseases with which hyperproteinemia was most constantly associated in the United States, lymphogranuloma venereum and multiple myeloma, were ruled out by a negative Frei test, normal roentgenograms of the bones, normal sternal marrow and absence of Bence-Jones protein in the urine.

Severe diarrhea of ten to twenty watery stools daily developed March 9, 1940 and persisted in spite of treatment. By March 15, petechiae had become visible in the conjuctivae and an irregular fever as high as 101 occurred. In spite of transfusions of whole blood and washed red cells, the hemoglobin reached only 82% and the red cells, 3,900,000 per cu. mm. April 22, the patient had a sudden attack of severe pain in the left upper quadrant of the abdomen, aggravated by deep breathing and associated with tenderness of the affected region. This was interpreted as splenic infarct. July 21 he had a chill with fever, low blood pressure and pulselessness. He appeared in extremis for a few days but then slowly improved.

He re-entered the hospital October 25, 1940 with evidence of severe congestive heart failure refractory to treatment. A left hemiplegia and aphasia without loss of consciousness developed suddenly November 24, 1940. The patient expired the next day. Antemortem blood cultures were again negative. The final clinical diagnosis was subacute bacterial endocarditis.

The significant autopsy observations by Dr. Israel Davidsohn were:

1. Thrombo-endocarditis of the mitral valve and endocardial lining of the auricles. The vegetations were large and friable and were sterile on smear and culture. Aschoff bodies were present under the endocardium and in the myocardium.
2. Chronic rheumatic deformities of the mitral, aortic and tricuspid valves.
3. Mycotic emboli to the arteries of the mesentery with multiple mycotic aneurysms.
4. Marked hyperplasia of the reticulo-endothelial (Kupffer) cells of the liver.
5. Loehlein's focal embolic glomerulonephritis.
6. Interstitial nephritis.
7. Embolus in the circle of Willis.

COMMENT

Differential Diagnosis. The presence of marked hyperproteinemia and hyperglobulinemia in the patient, along with persistently negative blood cultures, led to doubt regarding the diagnosis. It was especially difficult to exclude multiple myeloma, which had to be considered because of the hyperproteinemia, since cases of this disease have been reported in which x-rays of the bones and sternal punctures have remained

TABLE 1. LABORATORY DATA (Blood)

Date	Total Protein	Serum Albumin	Serum Globulin	NPN	Urea N	Formol Gel *	Takata Ara *	Weltman coagulation band	Sedimentation Rate mm./hr. Westergren (uncorrected)	Kahn test	Wassermann test
9- 8-39				37.2	24.8					—	
3- 2-40				62.0	34.0				110	—	Anti-complementary
3- 4-40				51.0							
3- 8-40	10.90	4.70	6.20	65.0	42.0	Neg.			129		Anti-complementary
3-15-40	8.12	3.84	4.28								
3-18-40				76.8	46.0						(By Sachs method neg.)
3-19-40							Neg.				
3-20-40								10			
3-25-40	12.1	4.33	7.77			1 plus		10			
3-27-40							Neg.				
4-22-40	8.06	4.11	3.95	44.0	23.5						
10-25-40	8.78	4.69	4.09			1 plus	Neg.	10	125		
11- 7-40				84.8	65.0			10			
11- 9-40				68.0	43.0						
11-11-40	7.84	3.86	3.98						59		

*These tests are usually strongly positive in hyperglobulinemia. A technical error is not excluded.

Rouleaux formation 4 plus on 3/25/40.

Highest calcium value was 11.4 mgs. per cent (on 4-22-40).

Creatinine, sugar, phosphorus, phosphatase, cholesterol, cholesterol-ester, chlorides and icterus index were within normal limits at all times.

negative for many months and the diagnosis was finally established only at autopsy.

Analogies to Libman's "abacterial phase of bacterial endocarditis". Libman[2] in 1913 reported a series of cases of bacterial endocarditis "which have spontaneously become bacteria free" so that for a variable period before death blood cultures were negative and at autopsy the vegetations were sterile. He introduced the concept of the abacterial phase of bacterial endocarditis. Our case is remarkably like those he described. The most characteristic features of his cases were the sterile blood cultures, the prolonged course, the frequency of congestive failure, azotemia in most of them, and the termination of 40% in uremia. The characteristic renal lesion in the ordinary type of bacterial endocarditis is Loehlein's embolic glomerulonephritis. Because of its focal character and the great reserve power of the kidneys, it does not produce azotemia. Libman thought that diffuse glomerulonephritis tends to develop in the abacterial cases because of their unusually long duration whereas in the bacterial cases sepsis, embolization or intercurrent infection kill the paient before diffuse nephritis and uremia can develop.

Relation of azotemia to hyperproteinemia. The presence of azotemia in our case of sterile vegetative endocarditis and the unusual frequency of azotemia in Libman's series suggests that hyperproteinemia may have been the common causative factor of the renal insufficiency. The impairment of renal function associated with hyperproteinemia has been attributed to plugging of the glomerular capillaries, inspissated protein, disturbances of osmotic pressure due to increased protein concentration or to increased rouleaux formation and auto-agglutination of the red blood corpuscles. A moderate degree of azotemia may occur in congestive heart failure but the elevation of the non-protein nitrogen had occurred in our case before cardiac failure supervened.

Interstitial nephritis and hyperproteinemia. The presence of interstitial nephritis in this case is of interest because of its rarity. Cecil[3] says of interstitial nephritis: "The disorder is usually associated with severe sepsis or with diph-

theria, and constitutes a post mortem finding without clinical significance." McCallum[4] lists scarlet fever and diphtheria as the disease in which interstitial nephritis has been found. Ewing[5] states: "Exudative and interstitial nephritis has been observed in many cases of myeloma and some authors have associated it with changes in blood protein." Hyperproteinemia and hyperglobulinemia are the rule in multiple myeloma and have been observed in scarlet fever. The association of interstitial nephritis with hyperglobulemia may be more than accidental.

The marked reticule-endothelial hyperplasia is noteworthy. Bing[6] believed that since a common factor in the various conditions associated with hyperglobulinemia is a proliferation of cells belonging to the reticulo-endothelial system, this system is probably the site of formation of globulin. The findings in our case are compatible with this hypothesis.

Possible virus etiology of sterile bacterial endocarditis. We question whether all cases of sterile bacterial endocarditis had a previous bacterial phase. The evidences of activity in this disease are just as marked in the so-called abacterial as in the bacterial cases. The persistently negative blood cultures and the absence of demonstrable organisms in the vegetations form some basis for the speculation that a virus may produce this type of endocarditis. An increasing number of common pathological states have recently been attributed to viruses. Eaton and his co-workers have demonstrated an immunological relationship between the virus of meningopneumonitis and that of lymphogranuloma venereum whose association with hyperproteinemia and hyperglobulinemia is well known. We offer this speculation as a working hypothesis for further investigation.

Hyperthyroidism and Subacute Bacterial Endocarditis. The association of hyperthyroidism with subacute bacterial endocarditis is so rare that we have been able to find only one other reported case.[7] The hyperglobulinemia was unrelated to the hyperthyroidism, as the latter had already been surgically corrected before the hyperglobulinemia was discovered.

SUMMARY

1. Marked hyperproteinemia and hyperglobulinemia were associated with subacute bacterial endocarditis in our case.

2. The frequent occurrence of azotemia in abacterial thrombo-endocarditis may be related to the associated hyperproteinemia.

3. A virus etiology is suggested in some cases of sterile thrombo-endocarditis.

4. The simultaneous occurrence of subacute bacterial endocarditis and hyperthyroidism is rare.

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STREPTOCOCCUS VIRIDANS MENINGITIS WITH PNEUMONIA

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Pneumonia or meningitis due to streptococcus viridans infections, unassociated with subacute bacterial endocarditis, is a rare occurrence. The presence of both pneumonia and meningitis in a patient who recovered is of sufficient interest to form the basis of this report.

Until the advent of chemotherapy any infection resulting from the green producing streptococcus was associated with an exceedingly high mortality rate. Gray reports that only sixty-six cases of meningitis due to all types of streptococci had recovered from 1901 to 1935. Rantz, after reviewing the literature, states that chemotherapy should lower the mortality rate in streptococcal meningitis from 95% to 20%. He states that 20% of all types of streptococcal meningitis are of the green producing type. Of this group 44% followed operations or injury, 11% followed upper respiratory infections and 11% no preceding cause for the disease could

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be found. Hodges gives a much lower incidence of streptococcus viridans meningitis. He reviewed 275 cases admitted to the Boston Infants' and Children's Hospital and found only one case of meningitis due to the green producing streptococcus.

At the Evanston Hospital the incidence of this disease has been low. Since 1940, 37 patients with meningitis have been treated and the case herein reported is the only one due to the streptococcus viridans.

Streptococcal viridans pneumonia also is exceedingly rare. Bullawa emphasises that although this organism is frequently found in the nose and throat it seldom causes a pneumonia process. Reiman is of the same opinion. Soloman, Manasch and Kalkstein reported 5 cases of streptococcus viridans pneumonia with one recovery. These authors point out that the diagnosis rests upon isolation of the organism from either the blood, pleural exudate or direct lung aspiration.

Experience at the Evanston Hospital emphasizes the rarity of streptococococcus viridans pneumonia. Since November 1940, 1193 patients with pneumonia have been admitted. Only one of these were of the green producing type. One patient was an infant 3 weeks of age who died on the third hospital day. The diagnosis was verified at post mortem. The second case is herein reported.

CASE REPORT

Mr. E. S., a 60 year old white married male was first seen at home on the morning of March 9, 1946. He stated that 3 days previously he had begun to have aching pains throughout the body, a mild cough and a slightly sore throat. He felt chilly and upon taking his temperature found it to be 102°. He remained in bed and took aspirin at frequent intervals. For the next two days he felt progressively weaker, and had frequent shaking chills and profuse sweats. The temperature varied from 99° and 103° and the cough continued but was unproductive. On the evening of the second day, the patient developed a severe unremitting generalized headache.

On the morning of March 9, 1946, I first saw the patient at home. He appeared acutely ill but was perfectly clear mentally and was sitting partially dressed in a chair. Examination revealed a temperature of 102°, a pulse of 100 per minute and slightly increased respiration. The pharynx was moderately injected, the ears were normal and there was no cervical adenopathy. No neck rigidity was present. The heart was normal except for a mild tachycardia. No abnormal lung findings were present. A transverse upper abdominal scar was present and the liver, kidneys and spleen were not palpable. There was no abdominal tenderness or rigidity. The blood pressure was 140.

Hospitalization was advised, the clinical impression being a probable virus pneumonia. Due to the shortage of hospital beds, the patient was not admitted until 9 o'clock that night. During the afternoon he had become very restless, irrational and at 5 P.M. could not be aroused from what his wife thought was a deep sleep.

Physical Examination. — On Examination at the hospital the patient was found to be comatose. The neck was very rigid and the Kernig and Brudzinski signs were positive. There was a cogwheel rigidity of all four extremities. The biceps, triceps, patellar and Achilles reflexes were equal but hyperactive. The abdominal reflexes were absent. There were no pathological reflexes. The temperature was 103° rectally and the respirations were 32 per minute. The physical examination was otherwise esssentially the same as it had been that morning.

Past History — The patient had been a known luetic for 20 years and had had adequate treatment. A gastric resection had been performed two years previously because of a gastric ulcer.

Laboratory Data. — A spinal puncture was performed immediately and a manometer reading revealed a pressure of 300 millimeters of water. The fluid was grossly cloudy and 1000 cells per cubic millimeter were found. These consisted of 91 per cent polymorphonuclear leucocytes and 9 per cent lymphocytes. A centrifuged smear stained with Gram's stain revealed large numbers of Gram positive diplococci which were later identified as streptococcus viridans. The spinal fluid protein was 217 milligrams per cent. The sugar was less than 10 milligrams per cent, chlorides 588 milligrams per cent and the Wasserman was negative.

Blood culture taken immediately upon admission revealed a heavy growth of streptococcus viridans. Throat culture was positive for the same organism plus a few colonies of hemolytic streptococci. The red cell count was 3,840,000, with 9.0 grams of hemoglobin. The white cell count was 12,300 with 90 per cent polymorphonuclear leucocytes, 8 per cent lymphocytes, and 1 per cent monocytes. Marked toxic granulation of the cells was present. Blood chemistry the following morning revealed a non protein nitrogen of 28.6 milligrams per cent, urea 10.1 milligrams per cent and chlorides 418 milligrams per cent. The sedimentation rate was 78 millimeters per hour by the Westergren method. The Kline reaction was positive. The urine was normal except for a trace of albumin and a few red blood cells.

Portable x-ray examination of the chest revealed a small area of consolidation in the mid portion of the right lower lobe.

Hospital Course. — The patient was immediately given 20,000 units of penicillin in 10 cubic centimeters of saline intrathecally and started on 50,000 units every

three hours intramuscularly. Five grams of sodium sulfadiazine was administered intravenously. Continuous oxygen was given by nasal catheter. Intravenous sodium sulfadiazine was given twice daily until March 14, 1946, when the patient was able to take the drug by mouth. Three thousand cubic centimeters of fluid were given parenterally each twenty-four hours for the first three days. On each of these days 1000 cubic centimeters of one-sixth molar sodium lactate was part of the fluid intake to insure alkalinity of the urine. The white blood count, urine and blood sulfadiazine level were checked daily. The sulfadiazine level was maintained between 14 and 16 milligrams per cent. Transfusions of five hundred cubic centimeters of type specific blood were given on the third and fourth hospital days.

On the third day the patient began to show signs of responding to external stimuli and on the fifth day he was able to take food and fluids by mouth. Sulfadiazine was taken orally on the fifth day and it was found necessary to give 2 grams every four hours in order to maintain an adequate blood level. Blood cultures were repeated on the third and fifth hospital days and were reported as negative. A spinal puncture repeated on the fifth day revealed the following findings: Protein 76 milligrams per cent, sugar 44 milligrams per cent, chlorides 638 milligrams per cent. There were 340 cells, 92 per cent polymorphonuclear leucocytes and 8 per cent lymphocytes. The culture was negative.

The rectal temperature dropped to 100° on the third hospital day and did not exceed 99° after the ninth day. Sulfadiazine was discontinued nine days after admission, but penicillin was continued every three hours intramuscularly until dismissal on the thirty-second day. The dosage of penicillin was lowered to 20,000 units every three hours after the fifth day. A spinal puncture on March 20, eleven days after hospitalization, revealed normal findings except for the presence of thirty cells.

The pneumonic process in the right lower lobe was slow in resolving and was not complete until April 9, 1946, when the patient was discharged thirty-two days after admission to the hospital.

DISCUSSION

The finding of the streptococcus viridans in the blood stream, spinal fluid and throat of the patient justify the conclusion that this organism was the cause of the meningitis. These findings strongly suggest that the pneumonic process was also the result of the streptococcal infection but definite proof of this point is lacking in that no direct lung punctures were obtained for culture. The normal heart findings and rapid improvement mitigate against the diagnosis of bacterial endocarditis, although this possibility cannot be completely disproven. The lack of any history of a preceding injury and the absence of disease in the ears and paranasal sinuses suggest that the streptococcus viridans gained entrance into the blood stream through the naso pharynx with a resulting infection of the meninges and possibly the lung.

SUMMARY

A case of streptococcus viridans meningitis with recovery is presented. The possibility that the associated pneumonia was probably the result of the same organism is considered. Pertinent articles in the literature are reviewed and experience at the Evanston Hospital is discussed.

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REFLECTIONS BASED ON PSYCHIATRIC WORK IN AN ARMY GENERAL HOSPITAL IN THE ETO

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We want to put the war behind us — except perhaps for some glorified, pleasant, or exciting memories. But there are perhaps some valuable lessons to be recalled, in understanding from a motivation point of view, the difficult problems which lay before us in finding economic and international security.

Perhaps it is not too traumatic to recall some of the factors which made some men good soldiers and fighters and others unable or emotionally ill. I think that we shall find these factors not unrelated to those which will determine whether in our day and culture, men can find peace and secure livelihoods. At least the thought is worth exploring.

The writer's psychiatric experience during the war was chiefly acquired in a continental general hospital which saw many army casualties

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from the fighting in Germany or the Northern Continental invasion. The combat exhaustion cases included disturbances which had developed in individuals long in combat or in soldiers who had engaged in short periods of battle. All were evacuated to us in the rear because it was felt either that they could do no more combat duty or required long rehabilitation before this was possible.

The soldiers' verbalizations whether in ordinary conversations or in confusional states or while they were being "abreacted" soon began to form into an interesting body of data which challenged evaluation. It seemed possible to allow for exaggerations and rationalizations, phantasy and elaboration in order to get at some interesting material for speculation both about the emotional life of the soldier in combat and also the psychological environment to which he was reacting.

It is difficult to discuss some environmental influences without emphasizing them at the expense of others. Certainly one of the most striking was the morale of the combat unit or group in which the soldier participated. This ordinarily intangible something became very tangible indeed in the feelings of soldiers during battle. Captain Herbert X. Spiegel brought this out well in his paper on his North African experience. But the morale of the group was something not only variable and sensitive to general and specific conditions but was particularly dependent upon the leaders, the equipment, the food, the shelter, and so on. However, it also interpenetrated into an entirely different area — the morale back home. Each soldier was not only a member of a combat team at the front but of some group or groups back home from whom fragile but important threads reached out to him via letters, packages, newspapers, articles, rumors, and so on.

We can say that the favorable environmental factors could be divided into two groups — the physical environmental conditions which gratified chiefly the basic human needs and the psychological elaborations and intangibles within the human environment. Of the former, some which we may enumerate are: fine equipment, adequate food, adequate manpower, but also solid preparation and planning. Our army usually came off well when judged by these factors just as our Country comes off magnificently judged by its natural resources. While food, shelter, etc., satisfied physical needs, they were at the same time strong psychological supports. Of the human environment, its group and individual morale, whether on the front, or in the rear hospital, or at home, we shall have more to say later.

Let us now try to some extent to separate the internal psychological conditions and factors of the soldier under great stress. It is obvious of course, that these are tied to and closely related to the external condition, even though we separate them for the moment.

Major Ludwig spoke of some of the following favorable internal "factors": capacity for strong pride; capacity for great sense of duty; great sense of belonging; strong faith in leadership; convictions about the war; and the sense of personal invulnerability in combat. We can see that these are not so different from the list which Dr. Roy Grinker gave us as early as 1943 under the heading "Protective factors which defend the individual against anxiety." Grinker's list runs as follows: (1) Capacity for group identification; (2) Drive toward a goal which is compatible with combat activity; (3) Capacity for great detachment; (4) Convictions of personal invulnerability; (5) Ability to express one's hostile feelings in combat without too much incapacitating guilt; (6) A minimum of physical exhaustion, fatigue, hunger or physical pain; and (7) A constitution which does not have a low threshold to anxiety. It is interesting that Grinker had to bring constitution in at that time.

Let us return to Ludwig. In considering his theories we enter into the field of ego psychology, but also into the field of motivation, in an important, if difficult way. The sense of pride he spoke of, was pride in being able to do combat or to continue at arduous and dangerous tasks. The sense of duty, he spoke of, sprang from one's conscience or super-ego and one's obligations to the group or society. The sense of belonging mentioned, resembles these, yet is different. The withdrawn individual may have a strong sense of personal duty and yet have little group spirit or the capacity to draw strength from the group. One would imagine that Grinker's very detached group might be limited in

their capacity for group identifications, even though they might be protected from depressing over-identifications (with dead or wounded buddies) by their detachment.

It was originally such men as Ernie Pyle as well as the capable line officers themselves who stressed the importance of the capacity for developing group spirit in combat, the strong sense of belonging, and the associated desire not to let the others down.

Ludwig's mention of: the capacity for faith in leadership only brings out what was stressed in discussing environment — that one of the most important parts of group morale was based in the leadership of the unit. The capacity for faith in leadership depends not only on the leaders themselves but in the individual directly correlated with his previous good and consistent experiences with his parent, or parent-substitutes and persons in authority.

The convictions of the American soldier about what he was fighting for and what he was fighting against, at first glance would seem to have been surprisingly few and disappointing. In a chief part this would appear to have been due to the lack of political education of the soldier. The question which Brigadier Reese once raised was whether superficial education on such matters at a late date in the army, especially for the purpose of stirring guilt, were not *artificially or temporarily* stirred feelings and motivations, sharply to be distinguished from strong, deep, and often inarticulate convictions.

It will be noted that the authors mentioned did not speak of bravery or courage or the capacity for such attitudes. This is probably because it was found that the "bravest" combat men *always* experienced or were reacting to varying degrees of fear.

Now let us take the obverse, the unfavorable external psychological factors. The soldiers with combat neuroses in their confusional states, or in conversations express these more forcibly.

Over and over again one heard of broken promises by superiors. Equally emphasized factors were the following: regimentation and discipline which didn't make sense or was regarded as unduly oppressive. Excessive chances or inadequate safeguards and unusual losses were stressed. Excessive fatigue and lack of relief from sustained combat tension and excitement were also stressed. Finally, poor group morale again was spoken of as playing the most important role. The broken promises were more often those implied rather than expressed. The combat soldier, who was naturally very concerned about the future, was particularly prone to sense and seize upon intangibles as well as the tangible spoken word. Lack of consistency in direction and leadership produces the same disappointments as broken promises. Of course, some inconsistencies were due to changes which arose from unexpected turns in the tactical situation. Then too, the uncertainty and suspense, which frequently developed, produced a state of indecision and rumor sensitivity in the minds of the soldiers themselves which helped create the appearance of inconsistency when it did not in fact exist.

It must be said here that the medical corps, too, was guilty of its share of broken promises and inconsistencies. The patient in a hospital was particularly susceptible to and did seize upon any ambivalences, intimations or statements which have to do with his disposition, prognosis, and treatment and perforce use these in support of his illness.

The effect of discipline on a group could probably be best measured by the amount of resentment generated in all during its employment and by the future effects, specifically the future willingness of the same group and individuals to perform under hardship. Unfortunately, the "favorable" effects of discipline at the moment are more easy to assess and study than its future repercussions and effects. There is, however, a wrong kind of discipline and regimentation as well as helpful forms.

The problems of consistency and discipline were chiefly problems for command. The rapid growth of our citizens army and the democratization of leadership without the proper time for the development of selection standards for officers was probably responsible for some of these difficulties.

Unnecessary risks and untenable positions apparently were most often taken by new platoon and company officers obsessed with the need to prove themselves, who went to an extreme so that foolhardiness was mistaken for courage. These situations created special problems for the

combat soldiers. Such actions were not only regarded as folly by the veteran foot-slogger but operated to threaten and undermine the feelings of personal invulnerability against destruction, which he might ordinarily have maintained.

Excessive fatigue and exceedingly prolonged combat tensions and emotions not only helped produce combat saturation but also tended to lower the thresholds against anxiety, and confusion, or exhausted themselves in depression and apathy. Against this, of course, the best safeguards were the interval rest periods for groups or individuals. I am reminded here of the statement of a Russian colonel of a medical commission who, visited us. He said, while stressing prophylaxis against combat exhaustion — "The line officer in our army makes a *medical decision* as to who should be sent back to an 'activity center' to prevent exhaustion". Perhaps, too, a tour of combat duty, like a tour of flight duty, was a necessary answer as a way of preventing relatively irreversible combat saturation.

The morale of a unit undoubtedly plays the most important part in maintaining or not maintaining a soldier in combat. The interdependence which ordinarily exists between members of a group is markedly enhanced under the stresses of external dangers such as threat of capture, injury or death. It is for this reason that the rapports established with these soldiers in hospitals at the time were so powerful and became such a strong fulcrum in moving the individual toward recovery. Having achieved this social dependence and interdependence such an individual seemed much more ready to turn to the army doctor and ward man for help in his neurotic illness. It is because of the need for interdependence in the combat units that time invested in just living together and practicing together was so well spent in the original training of divisions, over and above the value in the training in combat and weapons techniques. Men had to learn not only how to fight but how to live together while fighting. The home front morale, too, as had been mentioned, interpenetrated into the morale of a unit. The latter was difficult to evaluate because there was so much individual tendency to project difficulties upon those in a rear or upon another echelon, upon civilians, and upon members of one's own family.

Ludwig's and Grinker's studies of what helped men fight also gave us some idea of the types of neurotic problems are most likely to interfere with arduous soldiering.

Any strong neurotic conflicts which interfere with the ordinary sense of pride, sense of duty, feelings of belonging, development of convictions and sense of invulnerability or an equal chance — might interfere with combat efficiency.

Then there are those men in whom strong feelings of inadequacy and inferiority had interferred with the development of much strong sense of pride. There are those whose seclusiveness, anti-social or asocial tendencies prevent the development of any important sense of belonging. The sense of duty is most absent in the psychopaths whose social conscience was never good. Then there were those made temporarily very resentful and bitter by either long sustained poor group morale or what they regard as unjust treatment. Those individuals whose indecisions and ambivalences are inordinately strong (certain obsessives) might be incapacitated in the development of any sets of convictions and directions. Incidentally, convictions were often feelings or motives which could not be expressed, which might still have existed. Those whose negativism and rebelliousness were great, were led to a sharp rejection either of the convictions and premises on which our participation in this war was based, or a rejection of the leaders, faith in whom sometimes gave the equivalent of such convictions. Those neurotic individuals who regarded the world as a constantly dangerous place for one's physical health, even in peacetime, were hardly likely to have any sense of safety or personal infallibility during combat. They felt that with each shell their time *had* come.

Grinker, in a rather recent article, "War Neuroses in Flying Personnel", attempted to define more completely the type of neurotic adjustment which is most likely to break down in combat. Like Ludwig, he attempts to define individual types on the basis of their ability to fight or to break down.

But later studies, including those of Glass in Italy and Ludwig's, also, tended to show that

a number of severely neurotic individuals had done combat for considerable periods of time.

From all that has been said it would seem that the presence or absence of neurosis alone is not the prime determinant of whether a man can do long combat or not. This is especially important when one realizes that there is no definite threshold, anxiety tolerance in a particular individual or individuals. Psychoneurotic individuals like others can tolerate large amounts of anxiety within themselves and keep going provided the satisfactions they could achieve in combat were sufficiently great. And often the psychoneurotic individual felt greater pride in succeeding in an arduous task or felt greater satisfaction in being able to actually participate in a group or be a leader in any sense, than might another individual. Perhaps it was for this reason that some of the most tremendously anxious individuals the writer saw were the psychoneurotics, many of whom were described as having been just as anxious as on admission to hospital, for many months of combat. Perhaps too, some chronically anxious individuals had learned to erotize some of their free floating anxieties in civilian life and thus were able to experience larger amounts of it without breakdown. By contrast to these were many young line officers who had to be evacuated although they showed and felt practically no anxieties whatsoever. Examination revealed that in this group it was not a question of lack of tolerance to anxiety. The question was otherwise. These were overly-competitive men who had thrown themself into the competitive struggle of becoming an officer or of reaching higher grade because their whole motivation was to get ahead of the next fellow. In combat where this became a negligible motive especially when the tactical situation was such that the emphasis had to be on cooperation with others — including their sergeants and footsloggers — they often lost all interest or "froze." It was this type of officer who is chiefly responsible for a current subject of debate "Caste System or not in the Army". What the average American soldier resented most in officers aside from his tendency to project upon officers the difficulties of the situation, was the existence of extra privileges without associated extra responsibilities and hardships. It was these officers who needed so much to show their special position and that they had gotten ahead of the next fellow who flaunted extra privilege, nor did they show any mature responsibility and understanding.

More specific information about the individual who is reacting to the traumatic situation, and his particular personality structures, may perhaps also be learned by studying some of the commoner combat exhaustion syndromes. There was, for example, a whole group of cases who broke down with acute depressions in combat, especially when some buddy, or the leader in the group was killed. The papers by Grinker Leon Saul would seem to suggest that some of these fall in the class of individuals who are not able to handle, or freely express, their own hostilities, especially toward sibling substitutes, because of the great amount of associated guilt. It is interesting that in a number of cases which the writer saw it was possible to learn that a quarrel with the particular buddy or leader involved had occurred just before his death.

It was the author's feeling that the numerous so-called schizoid combat exhaustion cases similar to those described recently by Swank were the type of case which had similar dynamics. These men appeared schizoid to us because their affect seemed flattened and they seemed all "washed out". Actually, they would seem to be more properly described as deep apathies. However, every action and observation of these men over a period of time seemed to suggest that the apathy was a defense against much rage, against the whole environment, over their long combat predicament. They seemed to differ from the acute depressions in that they may have suffered acute minor depressions prior to the apathy, and that their guilt had not been stirred because of a conflict about one particular individual in their immediate environment on whom the depressed inviduals seemed to have been unconsciously dependent. Like the depressions, however, they were very happy to go to limited duty very quickly in order to carry on with their share and often had to be forced to go to the rear from the front because their motivation for combat out of guilt, was still relatively good.

It flows from all that is said here, that the *treatment of the environmental factors* which

make for emotional breakdowns in soldiers reduces itself chiefly to problems in prophylaxes. As such they are chiefly the problems of command. Regardless of responsibility, command would need the help not only of all its leaders and personnel but also a psychiatrist in dealing with or preventing unhealthy situations. When called upon to give advice, the command psychiatrist must not only be sound in his judgment, but must be able to deal with the situation in a secure and calm fashion. Brigadier Reese of the British Army once said that an army or divisional psychiatrist must be not so much a good theoretician as an eminently practical and capable individual with common sense. What I believe he means to say is that such a psychiatrist had to feel secure as a person and psychiatrist, in dealing with line or professional solider administrators and others, and that he must be able to speak with conviction, yet without prejudicing the issues of his future influence. To those who say that the psychiatrist would then be usurping the functions of command, it may be answered, first, that he is part of command or will be and that he speaks (ordinarily) when consulted for advice. In this respect he resembles the sanitary officer whose advice is always sought in problems of prophylaxis against contageous diseases. Recent army directive which places the responsibility for psychiatric casualties, upon command, move us even more in this direction.

In the prophylactic work, the effects of hospitals and reinforcement depots on soldiers other than those with neurotic breakdowns came in for a good deal of discussion. Two unfavorable factors which operated in these places were the uncertainty of the situation and the interruption of the feelings of belonging to one's unit. Greater speed in decision and disposition and less moving about in hospitals and reinforcement depots helped reduce some of the uncertainty inherent in these situations. Interruption of unit ties was somewhat alleviated by meeting old buddies. Divisional clubs, established and maintained even in the hospitals and especially in the depots, have been suggested. The divisional and battalion traditions and ties were rich, especially in the older and tried units, and were well worth maintaining and stressing.

The soldiers sense of invulnerability could be threatened by wounding or injury. Hospital rehabilitation programs helped to overcome this threat. Other methods, perhaps, exist. Some barriers which existed between garrison troops and combat also operated in hospitals and depots. As former combat men began to seep into these places, this gap became somewhat reduced. The differences in the life are often used as a method of projecting one's bad morale and even annoyances with the home front upon the garrison troops. But, of course, the most important reason for the bad feeling by combat troops toward garrison troops was based on the strong feeling that the hazards of combat being what they are, others too should share in them. Everyone was impressed by the strong insistence upon equalitarisms in the face of the danger of death and wounding. Those officers who understood this, won boundless support. This natural envy of the more favorably situated troops was so great that it became practically impossible to rehabilitate individuals suffering from combat exhaustion *for further combat* once they reached the rear areas.

Discussions of treatment of the combat exhaustion cases have been so exhaustive as to make further remarks here redundant. However, most discussions of the acute combat exhaustion cases have been confined chiefly to the discharge of the store of the pent-up feelings, mostly anxiety, to the neglect of the discussion of the techniques of therapy which had to do with the restoration of motivation — which actually involved rebuilding the faith in the environment where it had broken down, or faith of the individual in himself. This restoration of motivation whether it was motivation for further combat or limited duty in the army, must take into account all of the above mentioned factors, internal or external, which operated in the particular individual. Where marked regression to a psychotic, or benign stuporous state occurred, the individual, in addition certainly needed a definite amount of gratification or acceptable mothering at the regressed level before reintegration to and acceptance of higher level of adjustment oc-

curred. One advantage of the small doses of insulin which were almost a routine part of the treatment or the modified Dauerschlaf, seemed to be the acceptable mothering, including special feeding, which went with it. But psychotherapy and the understanding of the individual and his needs were still the prime factors in any treatment.

In conclusion, we have come a long way from early analysts and individuals who said that there will always be wars because men are by nature warlike and need to discharge their aggressive or death instinct in combat. Today we see a picture of individuals (among the American troops but also among other of the combatants) who were not motivated to do combat but who are yet willing to face death and other hazards out of necessity at first, and later not to let others and themselves down. If men are willing to face such hazards under such circumstances then the human individual is flexible indeed. It is not any "unresisting bad" human nature which should stand in the way of the difficult adjustments in peacetime of the atomic age. And particularly do we find that the things men live by, spring from the group he lives in or feels he belongs to. For the group perhaps he can forego more and more, for the sake of whatever advantage may accrue (such as social and economic security), or failing this, out of necessity.

DIAGNOSIS AND TREATMENT OF BLEPHAROPTOSIS

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Blepharoptosis is an abnormal drooping of either or both upper eyelids and may be a true ptosis or a pseudo-ptosis. The latter may be caused by an abnormal widening of the opposite palpebral fissure, or it may be due to a disease or increased weight of the lid on the side of the ptosis caused by trachomatous infiltration, lid tumors, spasm of the orgicularis muscle or neurofibromatosis. True ptosis indicates a weakness of the levator and smooth muscle due to a progressive muscular dystrophy, or peripheral or central nervous disorders. Only the subject of true ptosis will be elaborated upon. It may be congenital, acquired or hereditary in origin, unilateral or bilateral, partial or complete.

Acquired ptosis may be due to a lesion of the nervous system, disease of the upper lid or trauma. The chief causes of acquired ptosis are intoxications; acute or subacute infectious diseases; syphilis of the third nerve roots, third nerve nucleus, the supranuclear centers or the cortical centers; lesions of the brain substance, such as hemorrhage, abscess formation or tumor; various nervous system diseases, such as myasthenia gravis or multiple neuritis. In acquired ptosis, one should delay surgical interference until all other means of treatment have failed to effect a cure. One must attempt to avoid corneal exposure or ulceration, as well as diplopia.

The etiology of congenital ptosis is either a developmental defect of the levator muscle or a lesion of the central nervous system. Hereditary ptosis may manifest itself at birth (congenital type) or later in life (adult and juvenile types). The non-congenital, or late developing, type of hereditary ptosis is rare. Operations for ptosis comprise less then one per cent of all surgical procedures on the eye.

Congenital ptosis may be accompanied or associated with the following clinical anomalies: weakness of the superior rectus muscle, weakness of the superior rectus and the inferior oblique muscle, esotropia or exotropia, Duane's retraction syndrom (weakness or fibrosis of the external rectus muscle), and partial or complete external ophthalmoplegia. It may also be associated with epicanthus, blepharophimosis, an abnormal inner canthus, or an abnormal innervation of the levator muscle, producing jaw-winking (Marcus Gunn phenomenon).

Before any attempt at surgical correction is made, the following data should be obtained: (1) The vertical width of the palpebral fissure with eyes straight ahead, with eyes elevated, and with eyes depressed. The measurements should be compared with those of the patient when employing the aid of the frontalis muscles, arching his brows, corrugating his forehead, with the head thrown back, and also with the head level and the brows depressed by the fingers of the observer. By these measurements, one may ascertain the true strength of elevator

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power of the muscles of the upper eyelids when acting alone. (2) The length of the palpebral fissures horizontally measured from the angle of the external canthus by tangent and marginal measurements. (3) The extraocular motility of each eye, especially that of the superior rectus muscle. (4) Exophthalmometer reading. (5) the sensibility of the cornea and its ability to withstand exposure. (6) The effect of cocaine on the smooth muscle of the lid. (7) The vision of the two eyes and the presence of fusion, diplopia or amblyopia.

If a resection of the levator muscle is contemplated, the surgeon must determine, if possible, the anatomic condition of this muscle. If the levator action is entirely absent, it may not be wise to attempt a resection of the levator, although Blaskowicz and Lindner are of the opinion that some improvement will result in such cases. If the frontalis muscle is kept from acting by pressure on same, and the fissure is widened or the upper lid fold becomes more prominent in upward gaze, one can presume that there is action of the levator. If the ptosis is accompanied by a weak superior rectus muscle, the levator is usually poorly developed or weak. If a few drops of cocaine are instilled and the fissure becomes wider, one may presume the levator to be present.

A study of the extraocular muscles should be made in all cases, as there is often a weakness of the elevators of the globe in association with ptosis. Such a hypotropia should first be remedied before any surgical correction of the ptosis is attempted, especially if one contemplates a utilization of the superior rectus muscle to lift the ptosed lid. If the patient cannot roll his cornea upwards under cover of the upper lid during sleep, an exposure keratitis with ulceration and loss of the eye may result. Any exotropia or esotropia should be operated upon first before ptosis surgery is done.

One should note the position of the upper lid fold of each eye before operation, so that the new lid fold may be placed in its proper place at time of operation. If no lid fold is present, one may presume an absence of levator muscle power. Measurement of the vertical width of the tarsus should be made, so that one may estimate the amount of tarsus that may be safely resected. From 1.5 to 3 mm. of the tarsus must be left in the midline to preserve the normal arch of the upper lid margin.

If good vision in each eye is present before operation it becomes necessary to employ a ptosis operation which will least likely disturb binocular vision. If diplopia is present before operation when the ptosed lid is elevated, an attempt should be made to correct same before the ptosis surgery. If amblyopia of the ptosed eye is present, the danger of disturbing fusion or of producing a postoperative diplopia is negligible. The tactile sensibility of the cornea should be noted, for if the cornea is anesthetic one can almost be certain that uncovering the cornea will sooner or later result in a neuroparalytic keratitis, with its serious consequences.

Surgical Technique and Procedures.—The fact that so many techniques have been advocated and elaborated upon indicates the unsatisfactory results which may follow even in the best of hands. Many improvements have been tried, although most surgeons are limited in their opportunity to do many operations due to the fact that the condition is relatively rare. The various operations will be elaborated upon by grouping them under the specific class in which they fall.

1. *The removal of skin or of a full thickness of the eyelid* is the most simple procedure, but is indicated only when the skin is redundant. Large pieces of skin have been removed from the upper lids for use as free grafts without producing any permanent shortening of the upper lid or resulting in a lagophthalmos. However, in most ptosis cases there is usually no excess of skin, but usually a scarcity. The skin can be made adherent to the underlying tissues in the position of the normal crease with an occasional cosmetic improvement.

The technique is simple and consists of marking out the necessary amount of skin, excising within the thin skin areas of the lid, and avoiding the inner canthal region. No lagophthalmos should result afterwards, as this technique should never be expected to correct a real ptosis due to a weakness of the levator and smooth muscles of the lid. The production of deep cicatricial bands by traumatic surgery, infection or deep sutures, so that there is an adhesion between the upper lid and brow, is not good surgery. Better results may be accomplished in suitable

cases by levator muscle and tarsal resection. In trachomatous cases, one may consider a partial tarsus excision.

2. *Adhesion between the frontalis muscle and the upper lid,* although easy of accomplishment, is not good surgery. It leads to a straight upward lid pull, and accentuates the already present smooth lid effect. The implantation of deep long sutures, fascia lata and buried strips of epidermis is open to serious objections. If all the elevators of the globe and lid are paralyzed, it may be necessary to use the orbicularis fibers. While many such operations probably constitute the type of surgery most frequently performed, the end results are usually far from satisfactory.

3. *Transplantation of a part of the superior rectus muscle to the lid* to permit the use of the elevating power of the superior rectus and inferior oblique as devised by Motais. This operation is advisable when the levator and smooth muscles are practically inactive. A certain indication would be when the palpebral fissure is actually narrower on upward than on downward gaze. Most surgeons insist that the superior rectus action be strong, yet it may also be successful when the superior rectus is partially paralyzed providing there is no hypotropia and the inferior oblique is normal. If both the superior rectus and inferior oblique muscles are paralyzed, this operation is not indicated. It is usually contraindicated in unilateral cases, as there exists the danger of producing a post-operative hypotropia and diplopia. If the cornea is anesthetic, some complications may arise, as in sleep the lower part of the cornea is always exposed following this type of surgery.

However, when successfully performed, it does provide for the synchronous movement of the upper lid with the globe in looking up and down. Good elevation of the lid is secured, and a good lid fold develops. An important criticism of this operation is the resultant notching of the upper lid, which may necessitate a graduated tarsectomy at the time of the original surgery or later. Another important reason for failure is that the sutures employed in attaching the tongue of superior rectus muscle to the tarsus may pull out, or the adhesions produced between the upper lid and the globe pull out or become stretched. If the entire width of superior rectus is attached to the lid, without severing its tendinous attachment to the globe, a symblepharon with entropion and districhiasis results. The use of a fascia lata sling attached to each end of the tarsus and running under the superior rectus muscle has come into favor in recent years.

Diplopia may result if the superior rectus is weakened too much. However, if only the middle third of the muscle is used, the small amount of diplopia produced will not be annoying. A disturbance in the co-ordination of the act of closure of the lids results, and the globe is prevented from rolling up normally. However, the innervation, origin, and course of the muscle fibers of the levator and superior rectus are the same so that no re-education is required for the new function of the muscle.

The author believes that the easiest approach for the Motais operation is through the conjunctiva, but Kirby's modification of approaching through the skin, although much more difficult, allows for much more accuracy in suturing the tongue to the tarsus under direct inspection.

4. *The resection and advancement of the levator and smooth muscle of the lid and resection of the tarsus.* In cases of partial and almost complete ptosis, one should attempt to improve the remaining function of the levator and smooth muscle of the upper lid. The method of utilizing and developing the partial function of the levator and smooth muscle of the upper lid was popularized by de Blaskowics. The author is most partial to this type of surgery, and believes it gives the best results in properly chosen cases. The technique, although not simple, can be easily learned and will certainly be well worth the effort.

The technique of resection and advancement of the levator and smooth muscle of the lid with or without resection of the tarsus: Local anesthesia in patients 12 years and older consists of novocaine HCl 2% solution infiltration in the upper conjunctival fornix and skin of the upper lid. As a rule, 1 mm. of tarsus resection and 2 mm. of muscle resection will result in a correction of 1 mm. of ptosis. Having accurately measured the amount of ptosis present, one can determine beforehand the amount of resection of tarsus and muscle that will be necessary. One should be generous in the amount of resection

made, as the tissues may be stretched on everting the lid.

The lid is doubly everted over a Desmarres lid retractor and curvilinear incisions made with a sharp scalpel or cataract knife along the everted conjunctiva at the upper border of the tarsus. After the line of cleavage is found, the conjunctiva is dissected upward by sharp scissors' dissection for a distance of 10 to 12 mm. Three double armed black 4-0 twisted silk sutures are inserted at the cut conjunctival edge, from outside inwards and can then be used to hold the conjunctiva out of the way.

A second curvilinear incision is made parallel to the first through the tarsus to the orbicularis. Three white 4-0 double armed linen sutures are now inserted through the levator muscle about 3mm. upwards from the incision. They are used as traction sutures. Traction on these sutures will cause the wound to gape and the second plane of dissection is easily found. With a scissors dissection the voluntary and smooth muscle band is easily dissected upwards 15 to 18 mm.

Three fold sutures may or may not be used. Their use results in the formation of a nice lid fold. They consist of three black silk double armed 4-0 sutures inserted from outwards inwards. 3 to 4 mm. above the contemplated line of muscle resection. They are brought through the upper lid and loosely tied over rubber pegs or pearl buttons.

The three original doubled armed conjunctival smooth muscle band about 2 mm. above the predetermined line of resection. The muscle band sutures are now brought through the levator and is resected at the required distance, care being taken not to cut the sutures.

The predetermined amount of tarsus is now excised with a scissors. The three doubled armed sutures running through conjunctiva, levator and smooth muscle are brought through the skin just above the cut tarsal edge, usually about 5 mm. above the lid margin, and tied over rubber pegs or pearl buttons. These sutures should not be tied too tight, as there may be a skin necrosis from pressure if the tissues become too edematous. The three-fold sutures are now tightened. The globe is covered with vaseline and the three lower conjunctival and muscle sutures are brought down over the cheek and fastened with adhesive tape, thereby adequately covering the eye without any fear of corneal drying or exposure. A simple eye pad is applied.

Dressings are made daily. At first, there may be some edema of the tissues and the ptosis appears more marked. However, this disappears in a few days and by the second week the full effect of the operation becomes apparent. The results may be more gratifying in cases of partial ptosis.

SUMMARY

Ptosis or drooping of the upper lid may be corrected surgically. The author favors improvement of the function of the levator and smooth muscle of the upper lid, in cases in which this is partially or even slightly present. When there is no function of the levator or smooth muscle present, transplantation of a portion of the function of the superior rectus is employed. This procedure may also be recommended when the superior rectus is paralyzed and the inferior oblique is active and no hypotropia is present. In the condition of paralysis of elevation, when the levator and smooth muscle in addition to the superior rectus and the inferior oblique are all paralyzed and a hypotropia is present, one must resort to advancement and resection of the superior rectus and inferior oblique accompanied by a formation of symblepharon between the superior rectus and lid, or by the vicarious use of the frontalis muscle for final lid elevation.

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PERIODIC PHYSICAL EXAMINATIONS IN APPARENTLY WELL WOMEN

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The idea of periodic physical examinations in apparently well individuals is not new, and has long had the official approval of the American Medical Association. In 1922, by resolution of the House of Delegates, the Council on Health and Public Instruction was authorized to prepare forms suitable for the use of practitioners of medicine in the making of periodic health ex-

This paper was accomplished by the cooperation of all of the women physicians who have participated in the work of the Cancer Prevention Clinic, and with the especial assistance of Doctors Austin, Parsons, Phillips, Ortmayer, and Stenhouse.

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aminations. At subsequent meetings in San Francisco in 1923, and in Chicago in 1924, further resolutions were passed urging:

1st, that State and County Medical Societies, hospitals, and medical schools prepare their members, associates and students to undertake periodic health examinations.

2nd, that it be a paid service, except in case of the indigent, and

3rd, that the family physician should continue to be the most important factor in this new field of the prevention of sickness.

It is a well known fact that infant mortality rates have been reduced through well baby examinations and immunizations; that tuberculosis has been diagnosed early and successfully treated in thousands of persons because of routine chest x-rays made of school age children who had positive Mantoux tests; and that tremendous strides have been made in the control of syphilis by routine blood serology of apparently well persons.

More recently the value of early detection of cancer by painstaking examinations of apparently well individuals has cought the attention of both the medical profession and the lay public. It is generally agreed that, by detecting and adequately treating early cancer or precancerous conditions, many tragic cancer deaths could be prevented.

In December of 1945, at the Chicago meeting of the House of Delegates of the American Medical Association, a five way program proposed by the Service Division of the American Cancer Society was approved. This plan covers all functions concerning the cancer patient, one of which is the establishment of cancer detection, cancer prevention or well person clinics, designed to detect abnormalities not producing symptoms sufficient to send the patient to the doctor.

Dr. Elise S. L'Esperance, in 1937, pioneered by establishing the first clinic for complete physical examinations of well persons, with special reference to cancer, at the New York Infirmary for Women and Children. In 1938 a research clinic was established at the Woman's Medical College in Philadelphia by Doctors Macfarlane, Sturgis and Fetterman, to determine the value of periodic pelvic examinations in detecting early cancer of the female pelvic organs.

Stimulated by the success of these ventures, and wishing to establish a similar service in Chicago, the Executive Committee of the Field Army of the American Cancer Society, with Doctor John Wolfer as Chairman and Mrs. Arthur I. Edison as State Commander, requested me to try to interest a group of women doctors in the project.

Before the clinic was established, the plan was presented to and approved by the Council of the Chicago Medical Society. The president appointed a Committee of five members with Doctor James P. Simonds as Chairman, to act in an advisory capacity to the proposed clinic. This committee has remained active, and has been invaluable in planning the medical policies and procedures.

Space was donated by the Board of the Women and Children's Hospital, and the Cancer Prevention Clinic was opened on May 13, 1943. Patient appointments were made through the Field Army office, and Medical Social workers, nurses, clerical and technical help were supplied by the Field Army. According to the newly formulated Service Program of the American Cancer Society, which the American Medical Association has approved, the Society has agreed not to own or operate any clinics, laboratory, hospital or other facilities for the care of Cancer patients. The clinic is therefore, in the process of setting up a separate organization, but will continue to maintain close cooperation with the Illinois Division of the American Cancer Society.

The purpose of the clinic is to provide complete, periodic, physical examinations for a limited number of apparently well women, with a view to early detection of cancer or precancerous lesions, and to educate the examinees to the value of such examinations as a positive health measure. Patients are not accepted for examinations who are under treatment for cancer. No treatments of any kind are given by the clinic. All examinees who have any abnormality, whether related to cancer or not, are told of the nature of the condition, and urged to report to their family physician at once for further diagnosis and treatment.

Each patient attends the clinic on two occasions. On the first visit a careful, detailed, medical and social history is taken, and a complete examination is made. Routine laboratory work includes urinalysis, red and white counts, hemoglobin, blood smear, blood serology, as well

as, cervical and urethral smears, and a Papanicolaou vaginal smear. A fluoroscopic examination of the chest is made on all patients. Those who can, pay a laboratory fee of $5, but anyone who cannot afford the fee is examined without charge.

On the second visit major pathology is reinvestigated by one or more consultants who are specialists in the various medical fields. A verbal report is given to the examinee, and if any abnormality is found she is advised to consult her family physician regarding care. She is told that her physician may obtain a report of the examination upon request, if he so desires. Since a large percentage of the examinees have been found to have physical abnormalities in no way related to cancer, perhaps the title of Health Maintenance Clinics, which has been adopted elsewhere, might be a better name.

Over three thousand apparently well women have been examined by the clinic to date. The first two thousand records have been carefully reviewed. Table 1 shows the ages of this group; seven were nineteen years of age or under, and twenty-three were seventy years or older. The largest number, seven hundred and thirty-six, fall in the forty to forty-nine year group, and the next largest number, five hundred and seventy-three, in the thirty to thirty-nine year group, with four hundred and nine from fifty to fifty-nine years inclusive.

TABLE 1

Age of 2000 Examinees
Cancer Prevention Clinic

Years	Number of Patients
10-19	7
20-29	109
30-39	573
40-49	736
50-59	409
60-69	143
Over 70	23
Total	2000

Table 2 shows the occupations, and it will be noted that most of the examinees were housewives, 1301, and the next largest group 305 were office workers — with 65 teachers, 49 salesladies, 37 factory workers, 16 nurses and 14 unemployed. 101 fell into groupings of ten or less, while the remaining 112 did not give their occupations.

TABLE 2

Occupations of 2000 Examinees

Housewife	1301
Office Worker	305
Factory Worker	37
Saleslady	49
Teacher	65
Nurse	16
Unemployed	14
Others	101
Not Given	112
Total	2000

Table 3 gives the disposition of the examinees. In 494 instances there was either no pathology or it was considered so minimal that medical care was indicated. 1431 were referred to their own physicians for one reason or another, and 75 were referred to free or part-pay clinics as they were unable to finance private care. In some instances, because of the dislocation of both medical and lay persons due to the war, the examinee had no local medical connection. When this was true the medical social worker gave her two or three names from a panel of physicians selected by a Committee of the Chicago Medical Society.

TABLE 3

Disposition of Examinees

Referred to Own Physician	1431
Referred to a Clinic	75
Discharged — No pathology	494
Total	2000

Something over six- percent of all cancer deaths are said to be from primary lesions of the skin, lips or oral cavity. These areas were carefully examined, and all doubtful lesions were referred to the dermatology consultant. The following tables show the essential findings.

TABLE 4

Skin Lesions

Those definitely malignant clinically	15
Those suggestively malignant or pre-malignant	32
Those recently changed in size, color or had become sensitive	11
Those subject to friction or irritation	7
Miscellaneous tumors which needed investigation	42
Pigmented nevi which needed investigation	25

Table 5 shows additional skin findings which included 31 senile warts; 20 lipomas, 19 senile angiomas, 16 verrucae vulgaris, 14 sebaceous cysts and 10 lichen simplex.

TABLE 5
Other Skin Lesions

Seborrheic Keratosis (senile Wart)	31
Acne Vulgaris	7
Verruca Vulgaris	16
Lichen Simplex	10
Sebaceous Cysts	14
Fibromas	9
Psoriasis	7
Nail Changes	6
Lipomas	20
Senile Angiomas	19
Pruritis ani et vulvae	13

One hundred and twenty-four women complained of breast pain (Table 6), and 56 reported masses. On examinations lumps were found in 52 instances, and 29 indefinite indurations was observed. In 33 of these biopsies were requested. 28 reports were returned to the clinic by the doctors who made the biopsies, and of these 18 were benign and 10 malignant. Mastectomy had been done before we saw the examinee in 26 instances and 43 examinees had scars from previous biopsies. This is significant evidence that many doctors are on the alert for cancer of the breast.

TABLE 6
Complaints and Findings in Breast Examinations

Complaints	
Pain in the breast	124
Lump in the breast	56
Findings	
Lumps in the breast	52
Indefinite induration	29
Biopsy Requested	
Biopsy Reported	
Benign	18
Malignant	10
Previous Surgery	
Mastectomy	26
Simple Incision	43

There were 420 complaints referrable to the pelvis. A number of these were multiple in the same individual. The most common complaint was vaginal discharge (115), and the next most frequent complaint was low abdominal or pelvic pain (105). 57 complained of profuse menses 56 of irregular menstrual periods and 35 thought they had "a tumor".

TABLE 7
Pelvic Symptoms

Pain	
Low abdominal or pelvic	105
Backache	52
Profuse Menses	57
Irregular Menses	56
Vaginal Discharge	115
Tumor Suspected	35

Clinically the findings of the external genitalia (Table 8) were Kraurosis in 3 cases. There were 78 post-menopausal pruritis and vaginitis, 44 cystoceles with symptoms, 19 urethral caruncles, and 11 Bartholin cysts.

TABLE 8
Pelvic Findings

External Genitalia	
Kraurosis	3
Senile Pruritis and Vaginitis	78
Sebaceous Cyst of Labia	6
Lichenification	6
Enlarged Bartholin Gland	11
Urethral Caruncle	19
Vaginal Cyst	5
Cystocele with Symptoms	44

The cervix was lacerated or hypertrophied in 155 instances, and 272 erosions were seen. 34 examinees had trichomonas with symptoms, and there were 60 polyps.

The corpus was retroverted in 102 instances, and irregular masses suggestive of fibroids were palpated in 106. In 71 individuals adnexal masses were observed, 28 of which were on the right side, 31 on the left, and 12 bilateral.

TABLE 9
Pelvic Findings

Cervix	
Lacerated or Hypertrophied	155
Erosions	272
Polyps	60
Trichomonas with Symptoms	34
Corpus	
Retroverted	102
Nodular Enlargement (fibroid)	106
Prolapse with Symptoms	26
Adnexal Mass or Enlarged Ovary	
Right Side	28
Left Side	31
Bilateral	12

Fifteen cervical biopsies were requested, and no malignancies were found in those from whom we have heard. There were two adeno-carcinomas reported, one early and one far advanced. Since biopsies are not done in the clinic, and since we often do not know to whom the patient goes for diognosis and treatment, there are no doubt more malignancies than are reported.

One thousand nine hundred and forty-six of the two thousand examinees had fluoroscopic examinations of the chest. In 89 of these skeletal

variations, kyphosis and scoliosis, were noted.

Abnormal lung markings were recorded in 281 of the women examined; one third of these had parenchymal changes, 40% had increased broncho-vascular markings, 10% had mediastinal or diaphragmatic adhesions, the remaining had calcified densities. Wherever the fluoroscopic findings were doubtful, chest films were requested; no active pulmonary lesions were found in these follow-up films. In only one case was a metastatic lesion seen; in that patient a mastectomy had been performed for malignancy in 1942. No physical signs of this metastasis had been found.

Three hundred and eighteen of the women had abnormal cardiac silhouettes; of these 255 had cardiac enlargements, 51 had abnormalities of the aortic arch, 12 had pericardial adhesions, 214 of these were left heart enlargements.

In reviewing the histories one is impressed by the number who have symptoms referrable to the gastro-intestinal tract. It is difficult to select the ones who should have extensive investigation of the G.I. tract. On the other hand it is a well known fact that moderately advanced carcinoma may exist without symptoms.

In order to collect data which might be helpful in solving this problem a study of the large bowel by digital rectal examination, proctoscopic examination and berium enema is now under way in 1000 "well" volunteers from the group of examinees of the prevention clinic. In the course of this study numerous incidental x-ray findings were seen which include such things as enlarged livers, kidneys, spleens, not found by routine physical examination; renal and gallbladder lithiasis unknown to the patient; calcified glands, tumors, as well as, bony deformities, arthritic changes and anemalies of the spine. This makes one wonder if routine flat plates of the abdomen, as well as, routine chest plates might not be revealing.

Slightly over one-half or 1012 of the first 2,000 persons who requested examinations at the Prevention Clinic reported one or more members of their family with a cancer diagnosis. The rest requested examination because of lay education and publicity.

The public education on cancer control has gone ahead more rapidly than medical facilities have been provided. The clinic appointments are now for six months in advance. Health maintenance or Cancer prevention clinics have been opened in connection with Phildelphia's 5 medical schools; Pittsburgh, Los Angeles, San Francisco and Detroit have also established cancer prevention clinics. Most of the clinics do not do biopsies, and only a limited amount of diagnostic x-ray work, so they only have presemptive, not positive, evidence of cancer. The examinee is then referred to his or her own private physician or to a diagnostic clinic with recommendations for biopsy, cystoscopic examination or gastro-intestinal studies as the findings may indicate. This type of service is really no more or less than a screening examination designed particularly to rule out early visible cancer.

The American Medical Association and the American College of Surgeons have approved such clinics as valuable in cancer control, and an effort is being made to unify their procedures. There is a great potentiality for health education, health conservation, and service in such projects, but in order that they may be properly controlled they should all be under the vigilant supervision of the local County Medical Society.

This type of examination can be made by any well trained physician willing to take the trouble, or by a group of physicians with the assistance of a clinical and x-ray laboratory. Until such time as the cause of cancer is discovered, the early detection and adequate treatment by x-ray, radium and surgery offers the best means, at hand, to control malignant growths. If the public will submit to routine physical examination, and if physicians will conduct such examinations with painstaking care, cancer can be routed from its present position of second greatest killer in the United States.

Clinical Pathological Conference

PRESENTATION OF CASES

By
HOWARD WAKEFIELD, M.D., CHAIRMAN
and
EDWIN F. HIRSCH, M.D., PATHOLOGIST
ST. LUKE'S HOSPITAL
CHICAGO

CASE 1.—SYSTEMIC BLASTOMYCOSIS

A white youth, aged 20 years, entered St. Luke's Hospital in the care of Doctor N. C. Gilbert on September 29, 1945 and died on March 22, 1946. He had been in good health until March 1945 when he had an upper respiratory infection and stiffness of his neck. This was followed in about three weeks by a painful swelling about the right clavicle and later another swelling appeared over the dorsum of the right foot. He was in the hospital for about 12 days during which time these foci were incised and a dark red purulent exudate released. The foci never healed. They would close temporarily and then discharge a purulent exudate. A diagnosis of chronic osteomyelitis of the right clavicle was made and during the six months before admission to St. Luke's hospital he lost 30 pounds in weight.

When admitted his temperature was 103° F., pulse 128 per minute and blood pressure was 114 mm. mercury systolic and 58 mm. mercury diastolic. There was a chronic ulcer in the skin over the right clavicle and another was over the dorsum of the right foot. Lung signs suggested pulmonary tuberculosis. The leucocytes were 17,200 per cubic mm., the erythrocytes were 3,340,000 and the hemoglobin was 10 gms. per cent. Many examinations of the sputum failed to disclose acid-fast bacilli and exudates from the ulcer near the right clavicle did not produce tuberculosis in a guinea pig. Biopsy tissues of the ulcer and cultures of the exudates demonstrated blastomycosis. Roentgen examinations demonstrated an infiltration of the left lung. The pleura of each lung was thickened. The sternal end of the right clavicle had the changes of a chronic osteomyelitis. He received potassium iodide, streptomycin, penicillin and radiation therapy. A retropharyngeal abscess was drained several times. The patient's fever continued septic, he gradually lost weight and strength and died March 22, 1946.

The postmortem examination included only the tissues of the trunk and extremities. The emaciated body weighed 95 pounds and was 173 cms. long. At the inner third of the right clavicle was an ulcer of the skin and deeper tissues 7.5 by 3.5 cms. A fistulous channel extended into the sternal end of the clavicle. On the dorsum of the right foot was a region of necrosis 1.5 by 2 cms. covered with dry exudate. The lesion at the inner end of the right clavicle extended into a pocket behind this bone and the upper end of the sternum, about 4 cms. in maximum diameter. It contained a thick purulent exudate and the outer portions of both the sternum and the clavicle were involved. A few scattered fibrous adhesions were between the right lung and the chest, but the left pleural space was obliterated completely by dense adhesions. An empyema pocket on the left side just above the diaphragm was 12 by 8 by 4 cms. and contained a thick purulent exudate. The parabronchial lymph nodes were large and together a mass 6.5 by 4 by 1.5 cms. The moderately consolidated right lung weighed 610 grams.

Case 1, Figure 1 — Photograph illustrating the blastomycosis of the right lung.

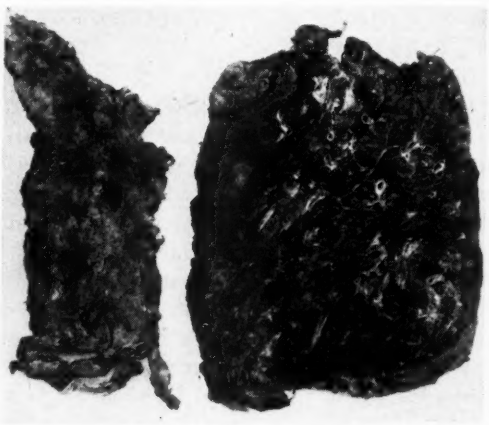
The visceral pleura was roughened by a few torn ends of fibrous tissue. Surfaces made by cutting frontally had many grey and grey red nodules, single and confluent, ranging to 1 cm. in diameter and comprised about 50 per cent of the lung parenchyma. The compressed left lung weighed 500 grams. The base of this lung had portions of the wall of the empyema pocket. This lung on surfaces made by cutting also was markedly consolidated by single and confluent nodules of grey tissue with some foci of necrosis. The fistulous channel to the right clavicle involved the bone and a sinus tract 8 mms. in diameter extended through the bone 4 cms. from the sterno-clavicular articulation and into the abscess pocket behind it.

A fistula extended from the lesion on the dorsum of the right foot into an abscess between the first and second metatarsal bones. The proximal end of the first metatarsal bone was involved. The prostate gland was 4 by 2.5 by 1.5 cms. and most of it was an abscess. There were only parenchymatous changes in the heart, liver and kidneys. The spleen weighed 175 grams, the liver 1675 grams. The other tissues had no significant changes.

The soft tissues about the right clavicle had large regions of caseation necrosis continuous with vascular fibroplastic chronic granulation tissues. Throughout these tissues were many multinucleated giant cells with engulfed blastomyces. Many yeast forms were outside of the giant cells. The consolidated lung tissues had lesions of two kinds: 1) an acute exudative inflammation with many polynuclear leucocytes and 2) chronic granulation tissues in stages of organization and with giant cells containing blastomyces. The tissues about the abscess of the prostate and those around the sinus of the right foot were granulomatous and had giant cells with blastomyces.

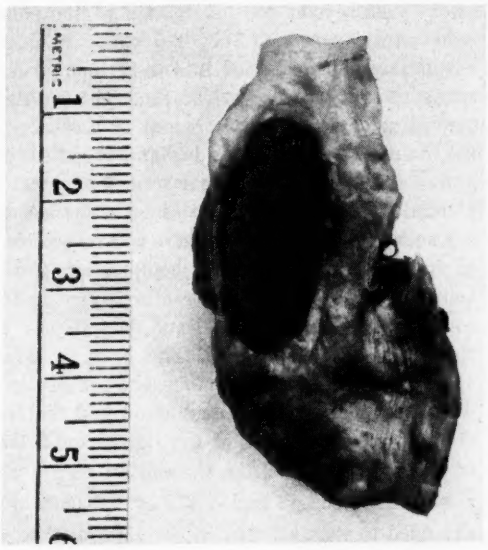
Cultures of the exudates in the abscess behind the right clavicle, in the left empyema of the chest and in the abscess of the right foot yielded growths of blastomyces.

Comment.—Chronic blastomycosis of the lungs with metastatic lesions presents a clinical diagnostic problem which may be confusing because the procedures used do not include those necessary for demonstrating the organism. When metastatic lesions occur and have progressed to the chronic ulcerative form in the patient, the clinician expects the laboratory service to determine the cause of the lesion by examinations of exudates submitted. The condition in which these exudates are submitted is important in determining the success or failure of the bacteriological studies. Some comments about the character of the ulceration should accompany the exudate material. As commonly practiced in



Case 1, Figure 2 — Photograph of the left lung illustrating its marked contraction and consolidation by blastomycosis. There was an empyema on this side, and along the left edge is a portion of the thickened parietal pleura.

laboratory examinations, the exudates are examined in moist and unstained cover glass preparations with a drop of 10 per cent sodium or potassium hydroxide solution; in gram and methylene blue stained films; in films stained for acid fast bacilli or by some other technique. The medium used for the bacteriologic studies should be chosen with some reference as to the probable nature of the causal agent. Animal inoculations, usually the guinea pig, are used to test for the presence of pathogens. The control of these exudate studies is a biopsy through the margin of the ulcerative lesion. With blastomycosis the biopsy examination is important because the yeast organisms can be demonstrated readily in the granulation tissues. Guinea pigs are not readily infected with the exudates of blastomycosis. Cultures on blood agar, plain and dextrose agar and other suitable mediums yield colonies of a colorless mycelium. In tissues the blastomyces reproduce by budding.

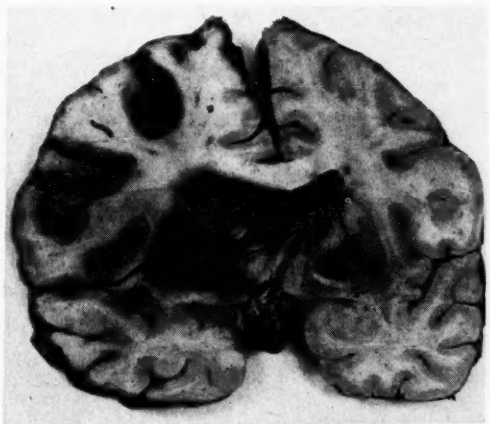


Case 2, Figure 1 — Photograph of the aneurysm with thrombus of the right internal carotid artery, continuous below is the common carotid artery and to the right is the origin of the external carotid artery.

CASE 2. — SACCULAR ANEURYSM OF THE CAROTID ARTERY

A white male aged 45 years entered St. Luke's Hospital on December 31, 1945 in the care of Doctor Robert Keeton because of pain in the back and shoulders. In April 1944 he had a sharp pain under his right shoulder which continued for six weeks and a year later he had weakness and swelling of the fingers of his left hand which disappeared and returned at intervals. A roentgen examination of his neck in September 1945 was said to disclose a compression fracture of the third and fourth cervical vertebrae. The blood had 4,460,000 erythrocytes and 8,800 leucocytes per c. m. The hemoglobin was 13.6 gms. per cent. The sedimentation rate and the chemical analysis of the blood were within the normal range. The Kahn reaction was negative. The physical examination demonstrated nothing unusual except a nodule 2 cms. in diameter in the right side of the neck just below the angle of the jaw. It was firm and pulsated. While this nodule was being examined, the patient suddenly fell back in bed and had choreiform movements of his right side, which became spastic and a spasticity of the right side developed. He responded only by opening his eyes. He became dyspneic, developed Cheyne-Stokes respirations and bilateral Babinski reflexes. He received oxygen and mild sedatives but never regained consciousness and died about 17 hours after the onset of coma.

The important changes demonstrated by the complete postmortem examination were in the neck and head structures. The superficial and deep tissues of the neck had no unusual changes. The linings of the right and left internal and deep jugular veins were smooth. There was a saccular aneurysm of the right internal carotid



Case 2, Figure 2 — Photograph illustrating the hemorrhagic infarcts of the basal ganglia and cortex of the brain. There is a small hemorhage into the lateral ventricle.

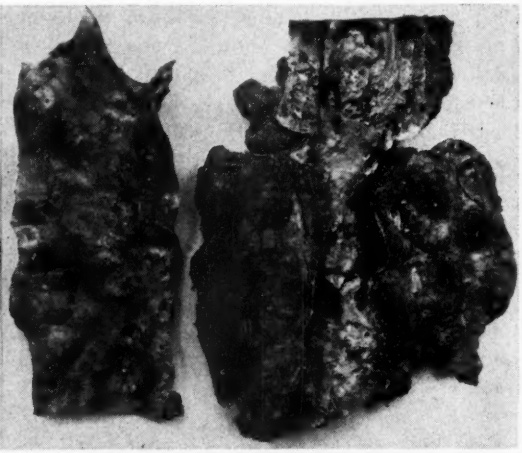
artery just beyond the bifurcation of the common carotid artery, 1.5 by 2.0 cms. A large recent thrombus extended into the lumen of the aneurysm but the channel of the right internal carotid artery beyond was patent to the base of the cranium. The thyroid gland weighed 45 grams and had several circumscribed regions of glandular hyperplasia. The other structures of the neck had no changes. There was no evidence of fracture, displacement or compression of the bodies of the cervical vertebrae or injury of the soft tissues. The superficial and deep tissues of the scalp were unchanged. The brain weighed 1640 grams. It was edematous, the convolutions were flattened, and the sulci narrow and shallow. On the inferior surface of the right frontal lobe of the brain 2 cms. from the central fissure was a soft hemorrhagic region 6.5 by 2.0 cms. that extended to within 2 cms. of the anterior pole of the right cerebral hemisphere. There was a small thrombus in the terminal portion of the right internal carotid artery and in the first portion of the temporo-parietal branch of the right middle cerebral artery. At the origin of the right anterior cerebral artery was a small saccular aneurysm. This and a segment of the artery were thrombosed. The cerebrum was cut into 17 coronal sections. There was extensive softening with hemorrhage of the right basal ganglia and also of several portions of the cerebrum including the cortex. The pons had several similar regions ranging to 1.5 cms. in diameter. The right lateral ventricle and the fourth ventricle of the brain contained blood.

Comment.—The clinical symptoms of this patient seem clearly to be associated with the saccular aneurysm of the right internal carotid artery, complicated by mural thrombosis and multiple embolic infarcts of the brain. Apparently he had had small emboli with focal infarcts of the right cerebrum before the last serious episode. He recovered from these without residues. The dislodgement of thrombus material by palpation of the aneurysm during the physical examination seems probable. The aneurysm seems to have originated in atherosclerotic changes of the vessel wall. The Kahn reaction of the blood was negative and sections of the aorta and other vessels of the body had none of the changes of syphilis.

CASE 3. — ABDOMINAL LYMPHOSARCOMA

A white woman aged 83 years entered St. Luke's Hospital on November 21, 1945 in the care of Dr. Carl Rinder because of a daily fever of 102° F. She had been in the hospital for several days during October, 1945 because of joint pains of about five months' duration. Her blood pressure was 216 mm. of mercury systolic and 98 mm. of mercury diastolic. The heart had a systolic aortic murmur, the lungs had a few rales. A mass in the upper left quadrant

Case 3, Figure 1 — Photograph illustrating the lymphosarcoma of the mesenteric lymph nodes.



Case 3, Figure 2 — Photograph illustrating the tumor tissues in the periaortic abdominal lymph nodes. There is a marked atherosclerosis of the aorta.

of the abdomen at first considered to be the spleen was later thought to be a cancerous tumor. The many special blood examinations disclosed a reversal of the albumen-globulin ratio in a total protein of 7.22 gms. per cent of which 2.6 gms. was albumen. The sedimentation rate was markedly prolonged. The red blood cells were 3,260,000 per cubic millimeter, the leucocytes 10,250 and the hemoglobin 9.6 grams per cent. The differential blood count disclosed 81 per cent neutrophil leucocytes, 2 per cent eosinophil, 16 per cent lymphocytes and 1 per cent monocytes. Blood cultures and agglutination tests for typhoid, brucella and dysentery infections were negative. Despite large doses of penicillin her fever continued high, she grew progressively worse and she died on January 17, 1946.

The complete postmortem examination demonstrated lymphosarcoma of the periaortic abdominal, parabronchial, mesenteric and pelvic lymph nodes and of the spleen; and lymphosarcoma invasion with thrombosis of the thoracic duct, the inferior vena cava and the right common iliac vein. There were other changes of the viscera but mainly those occurring with advanced age. The histologic examinations placed the sarcoma in the recticulum cell group.

Comment.—Lymphosarcomas of the abdomen involving lymph nodes in an inaccessible region present difficult clinical diagnostic problems. Fever of undetermined origin may be, as in this patient, the main symptom. A palpable abdominal mass gives only a general clue as to the tumorous character of the disease and not infrequently clarification comes only through the postmortem examination.

FOOD POISONING (Continued)

niques of food sanitation to those responsible for the outbreak. It is the combined information obtained from physicians' reports that makes this action possible.

The alert health department, of course, will not be content to wait for things to happen. Much has been accomplished in many communities through sanitation programs in which the education of food handlers is a chief feature. The value of refrigeration, sanitary preparation of food, significance of communicable disease and skin infections, personal hygiene, clean facilities, rodent and insect control are subjects receiving emphasis. A program of this nature will not prevent all outbreaks, of course, but experience has demonstrated its worth. Just a little of this information with respect to refrigeration and skin infections would have allowed at least one bridge game to proceed to a pleasant ending!

ERROR IN SLIDE RULE FOR METRIC CONVERSION OFFERED TO PHYSICIANS

Ciba Pharmaceutical Products, Inc., Summit, New Jersey are currently mailing to all physicians an extremely useful promotional piece. Designed to aid the physician in converting apothecary to metric units, the Medical Slyd-Rul is only 5½ inches in length and may be easily carried in the vest pocket along with pens and thermometers. Now that the U. S. Pharmacopeia XIII and the American Medical Association have adopted the metric system as standard, the need for quick conversion is greater than ever.

Due to manufacturers' error in placement of decimal point, conversion from 0.4 grain to gram is incorrect. It should read 0.025 gram, not 0.25. Physicians are asked to make correction by replacing present celluloid table with corrected temporary paper table now being mailed to them.

Ciba will replace the temporary slide with a new celluloid table as soon as possible.

The health of all peoples is fundamental to the attainment of peace and security and is dependent upon the fullest cooperation of individuals and States. Constitution of the World Health Organization, U. N.

HEALTH AND PHYSICAL FITNESS PROJECT BECOMES PART OF A.M.A. BUREAU

Recognizing the need for greater health education, the American Medical Association has established the Health and Physical Fitness Project in its Bureau of Health Education to study the problems of the preschool child, the school child, the college student, the adult and the industrial worker, states an editorial in the November 2 issue of *The Journal.*

The editorial follows in full:

"With the establishment of the Health and Physical Fitness Project in its Bureau of Health Education, the Association takes another step forward in its effort to contribute to the promotion of health. Health and physical fitness are important even though the popular interest in them has considerably diminished with the end of the war. The Board of Trustees early in 1946 authorized the establishment of a health and physical fitness project in the Bureau of Health Education to work under the supervision of the American Medical Association Committee on Health and Physical Fitness.

"The project will include the health and fitness problems of the preschool child, the school child, the college student, the adult, both rural and urban, and the industrial worker. Though the committee contemplates cooperation with all other health agencies working toward health improvement in home, school, industry and community, it has expressed the belief that it is first in the schools and second in industry that the most immediate and most practical approach to the problem lies. The efforts of the consultants in the project will therefore be directed to these fields.

"The committee will not attempt to set up any master plan or 'ideal' health programs and then attempt to procure their widespread adoption in the schools and industries of all types and sizes. Rather it is the plan to accumulate source files on the varied health programs now in use with the purpose of making both reports on these programs and the advice and counsel of the two consultants available on invitation to boards of health, boards of education, employers, employee groups, medical societies and women's organizations.

"This project is in a sense a continuation of the work carried on by the Association in conjunction with government agencies and other interested groups during the late war. Including the project in the total health education program of the Association and staffing it with a physician who has had wide experience in health education and an educator experienced in the health and physical education fields will give it previous organization."

CHEAP GLASSES CAUSE EYE DISTRESS

Many poorly fitting and cheap glasses cause ocular distress and headaches, according to the December 7 issue of *The Journal of the American Medical Association.*

"A person who has such distress when he wears glasses naturally take them off, just as a man takes off a pair of shoes that does not fit him comfortably," *The Journal* states in answer to a query.

In discussing the harmful or beneficial effects of the average sun glasses on the eyes, *The Journal* states:

"The average sun glasses, obtained in drug and ten cent stores, if sufficiently dark, are as a rule comforting to the eyes of the average wearer on an average bright day, on the water or on the beach, where they are usually used. They reduce the total amount of light entering the eyes. The idea that certain makes of glass do not transmit the 'harmful' ultraviolet light is mostly sales talk, as the ordinary white glass allows but little ultraviolet light to pass through. In fact, in order to obtain passage for ultraviolet through a window pane it has to be specially made for that purpose. A certain amount of ultraviolet light is beneficial to the eyes; it is for this reason that vacations are taken at the seashore and in the mountains, and in the winter patients are sent to sunny climes."

In tuberculosis, rehabilitation is a form of treatment. Obviously, during the period of diagnosis and early hospitalization, medical care is paramount; but, at some point during the period of hospitalization, vocational guidance and training constitute a large portion of treatment and are continued into the immediate post-sanatorium period. Herman E. Hilleboe, M.D. and Norvin C. Kiefer, M.D., Pub. Health Rep., March 1, 1946.

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

BUREAU COUNTY

Society News.—Dr. James W. Sours, Peoria, addressed the Bureau County Medical Society in Spring Valley, January 14, on diseases of the liver.

CHAMPAIGN COUNTY

The Support of Medical Care.—"Private Versus Public Support of Medical Care" was the theme of a debate during the Rural Life Conference at the University of Illinois, Champaign, January 29. The two hour session was conducted by Dr. Mark V. Ziegler, chief medical officer, U. S. Department of Agriculture, Washington 25, D. C., speaking for public support of medical care, while Mr. John Neal, Chicago, Secretary of the Committee on Medical Service and Public Relations of the Illinois State Medical Society, spoke in defense of private or non-governmental support of medical care. Victor Lindberg presided at the session.

COOK COUNTY

Cancer Foundation Files for Charter.—Application for a charter for the University of Chicago Cancer Research Foundation was filed in Springfield recently. The foundation stems from the various research projects on cancer carried on at the University of Chicago and centers on the proposed Nathan Goldblatt Memorial Hospital for which the Goldblatt Brothers recently gave one million dollars. The new university foundation was organized as the agency to obtain support for the extensive cancer program and has offices at 122 South Michigan Avenue. In a statement to the press, December 22, E. C. Colwell, president of the university, indicated that some of the support of the foundation will be devoted to the Institute of Nuclear Studies and the Institute of Radiobiology and Biophysics at the University of Chicago. New equipment will include a 100 million electron volt betatron and a 92 inch cyclotron. Construction of the seven story Nathan Goldblatt Memorial Hospital will begin next spring.

University News.—An electroencephalograph, used in studying the brain, has been installed at Northwestern University Medical School. Psychologic applications in the use of the machine, which thus far have been little studied, will be carried on by Donald B. Lindsley, professor of psychology at Northwestern, according to newspaper reports. Dr. Helen V. McLean of the Institute for Psychoanalysis lectured at the University of Illinois College of Medicine, January 8, on "Prejudice and Race Discrimination."

Bequest to Hospital.—Mercy Hospital, Chicago, recently received a check for $200,000 from the estate of the late Mrs. Louise de Beaurepaire Thompson, wife of the late Ferris Thompson. The gift, which will be applied toward the erection of a proposed $6,000,000 hospital, brings to $615,000 the total benefactions given by Mr. and Mrs. Thompson. The contributions started in 1912 with an initial gift of $250,000 and continued through the years with an annual gift of $5,000.

Personal.—Dr. Maurice I. Edelman, formerly of Chicago and recently separated from active duty in the U. S. Navy, is now associated with Dr. A. R. Hollender, specializing in ophthalmology and otorhinolaryngology, in Miami, Fla.

Society News.—Dr. Meyer A. Perlstein, Chicago, will address the Allegheny Society for Crippled Children in Pittsburgh, Pa., February 26, on treatment and management of cerebral palsy. Dr. Perlstein presented the same subject before the Spastic Club of Chicago, January 31, the Georgia Society for Crippled Children and a meeting of faculty and students of Emory University School of Medicine, Atlanta, February 3, and before the University of Georgia School of Medicine, Augusta, February 4.—Dr. Mary G. Schroeder delivered a talk entitled "Looking Forward at Forty" before the South Edgebrook Woman's Club in Chicago, January 13.—"Stop Annoying Your Children" was the theme of an address by Dr. William W. Bolton, assistant director, Bureau of Health Education, American Medical Association, Chicago, before the John M. Palmer Parent Teacher Association in Chicago, January 14.—Dr. George E. Wakerlin,

Chicago, addressed the Woman's Club in Downers Grove, January 15, on "Cancer and Its Control." — Dr. John F. Pick, Chicago, discussed "The Surgery of Burns and Their Consequences" before the Academy of Medicine of Toledo and Lucas County, Toledo, February 7.

Legion of Merit Awarded.—Col. Paul A. Campbell, Chicago, was presented with the Legion of Merit Award in a special ceremony at the University of Illinois College of Medicine recently. The citation accompanying the award stated that Dr. Campbell, "as director of research, Army Air Forces School of Aviation, from May 1942 to October 1945, directed a research program which provided solutions to hundreds of medical problems associated with aviation. Colonel Campbell's outstanding professional ability and extraordinary achievements reflect great credit upon himself and the armed forces of the United States."

Henry Pope Dies.—Henry Pope, Sr., prominent manufacturer and co-founder with the late President Roosevelt of the Georgia Warm Springs Infantile Paralysis Foundation, died January 7, at his home in Chicago. Mr. Pope donated the site for the Warm Springs Foundation in 1927 and served as a vice president and trustee until ill health caused his resignation in March 1946. Mr. Pope also created the Pope Foundation in 1934 to "alleviate human suffering and disease through scientific research."

Dr. Cordes Gives Gifford Lecture.—Dr. Frederick C. Cordes, professor of ophthalmology, University of California Medical School, San Francisco, delivered the third annual Sanford R. Gifford Memorial Lecture at the John B. Murphy Memorial Auditorium of the American College of Surgeons, Chicago, January 20, on "Types of Congenital Cataract." The lecture was sponsored by the Chicago Ophthalmological Society.

Physician Wills Fund to Harvard.—The will of Dr. John Favill, late professor of neurology, University of Illinois College of Medicine, provides that a trust established in 1935 for his first wife, Mrs. Rhea Stalcup Favill, be dissolved at her death and given to Harvard University. Dr. Favill, who graduated at Harvard Medical School, Boston, in 1913, died December 21.

Physiologist Praises the Press.—Dr. Andrew C. Ivy, Vice President of the Chicago Professional Colleges, University of Illinois, in a published statement, January 3, praised the Chicago *Daily News* for its increased reporting of science stories, acknowledging its accurate reporting and interpretation and commenting on the work of Arthur J. Snider, staff reporter. Dr. Ivy, who recently went to Germany to testify in the trial of Nazi doctors charged with medical war crimes, was the American representative on a commission that investigated the doctors.

Institute of Medicine Lectures.—Dr. Robert H. E. Elliott, Jr., department of surgery, Columbia University College of Physicians and Surgeons, will present the twenty-third Lewis Linn McArthur Lecture of the Frank Billings Foundation at the Palmer House, February 28, at 8 o'clock. His subject will be "A Revaluation of Splenectomy in Thrombocytopenic Purpura, Based on a Twenty-Seven Year Combined Clinic Follow-Up."—The twenty-third Ludvig Hektoen Lecture of the Frank Billings Foundation will be delivered at the Palmer House on Friday evening, March 28, at 8 o'clock by Dr. Herbert M. Evans, director, Institute of Experimental Biology, University of California, Berkeley, on "The Internal Secretions of the Pituitary Body."

Tuberculosis Appointments.—Dr. Arthur W. Newitt, senior surgeon, U. S. Public Health Service, has been selected tuberculosis control officer of Chicago, a newly created position. Dr. Newitt has been granted leave by the public health service only long enough to establish the Chicago tuberculosis office. He has been in the service as tuberculosis control consultant since 1931 and in the last two years has made control surveys in Chicago, Cook County and New York City. Dr. Camillo E. Volini, Chicago, on January 8 was named superintendent of clinics for the Municipal Tuberculosis Sanatorium, Chicago, succeeding the late Dr. Edward R. Troy. Dr. Volini has been a member of the sanatorium staff since 1934, serving as director of field collapse therapy since 1940. He graduated at Loyola University School of Medicine, Chicago, in 1933.

Special Society Elections.—At a meeting of the Chicago Tuberculosis Society recently Dr. Hugo T. Cutrera was elected president, Dr. Jacob L. Marks, vice president, and Dr. George W. Holmes, secretary-treasurer. Dr. J. Arthur Myers, Minneapolis, presented a paper at the meeting on "Early Tuberculosis."—Dr. Theodore B. Bernstein has been chosen president-elect of the Chicago Society of Allergy. Dr. William A. Mowry, Madison, Wis., is president and Dr. Edward G. Tatge, Evanston, secretary-treasurer.

Research in Atmospheric Environment and Aviation Medicine.—Medical research in atmospheric environment and aviation medicine will be accelerated at the University of Illinois with the completion next summer of a new physical environment addition to the Research and Educational Hospitals at the Chicago Professional College Campus, Polk and Wood streets. Architects are now at work on the final drawings for the new addition, a one story structure with sufficient ceiling height to house a large pressure and temperature controlled chamber, a large psychrometric room and an acoustic laboratory. Cost of the research addition will be $250,000. An additional expenditure of $250,000 will be made for the major portion of the research equipment, which, because of its size, must be installed before the walls of the building are completed.

DE WITT COUNTY

Twenty-One Years as Secretary.—Dr. William R. Marshall, Clinton, with his reelection at the Decem-

ber meeting of the De Witt County Medical Society, entered his twenty-second consecutive year as secretary-treasurer of the society. Dr. Marshall graduated at the Chicago College of Medicine and Surgery in 1909. Dr. Keith Rhea, Clinton, and Dr. Wiley R. Marvel, were elected president and vice president, respectively, of the county medical society. As guest speaker, Dr. Wilbur G. Ball, Bloomington, addressed the meeting on treatment of diseases of the rectum.

Personal.—Dr. Charles W. Carter, Clinton, who is spending the winter in Florida, has announced his retirement from active practice. He graduated at the University of Illinois College of Medicine, Chicago, in 1897.—Mrs. Philip Sudendorf has been named superintendent of the Dr. John Warner Hospital, Clinton, succeeding Miss Clara Lee Cline, R.N., resigned.

FULTON COUNTY

Society News.—Dr. Louis N. Tate, Galesburg, discussed "Acute Rheumatic Fever" before the Fulton County Medical Society at a meeting in Canton, January 16, and Dr. Milo G. Reed, Galesburg, spoke on "Segmental Neuralgia."

LAKE COUNTY

Hospital News.—Highland Park Hospital plans a program of expansion to cost about $525,000, it was announced December 15. Tentative plans call for the installation of a new unit for infant and maternal care, the construction of a surgical suite and addition of utility rooms. The erection of an east wing to the hospital will permit the expansion of bed capacity from an existing 47 beds to 100.

LIVINGSTON COUNTY

Society News.—Dr. John F. Pick, clinical assistant professor of surgery, University of Illinois College of Medicine, Chicago, discussed "Methods of Plastic Repair" before the Livingston County Medical Society in Pontiac, December 12. Dr. Pick, who was chief surgeon of the Fourth Service Command, showed slides illustrating war surgery as it was handled overseas. One action taken by members of the society during its meeting was a vote to send news releases to all newspapers in Livingston County concerning common diseases. Members of the society were dinner guests of Drs. George I. Blough, Odell, and Bertram A. Richardson, Emington, at the Liberty Cafe, Pontiac.

LOGAN COUNTY

Neuropsychiatric Conference.—A two day postgraduate assembly in neuropsychiatry was held at the Lincoln State School & Colony, Lincoln, January 28-29, as a part of the educational program of the Illinois State Department of Public Welfare for state hospital physicians in the general practice of medicine in Illinois. The program included the following speakers:

Dr. H. H. Garner, clinical assistant professor of psychiatry, University of Illinois College of Medicine, Chicago, "Psychosomatic Medicine."

Dr. Ben W. Lichtenstein, associate professor of neurology at the University of Illinois College of Medicine and state neuropathologist, "Syphilis of the Nervous System."

Dr. George J. Mohr, associate professor of criminology, University of Illinois College of Medicine, "Emotional Disturbances in Childhood."

Dr. Milton Tinsely, member of the staff of the Neuropsychiatric Institute, Chicago, "Management of Acute Head Injury."

Dr. Frederic A. Gibbs, associate professor of psychiatry, University of Illinois College of Medicine, Chicago, "The Value of Electroencephalography."

David Shakow, chief psychologist, department of psychiatry at Illinois, "The Significance and Value of Psychological Tests."

Dr. Ralph Hamill, emeritus professor of psychiatry, University of Illinois College of Medicine, Chicago, "The Relationship Between Psychiatric Disturbances in Children and Adult Psychoses."

Dr. Richard B. Richter, professor of medicine (neurology), University of Chicago School of Medicine, "Acute and Chronic Encephalitis."

Dr. Paul C. Bucy, professor of neurology and neurosurgery, University of Illinois College of Medicine, "The Problem of Low Back Pain."

With Dr. William W. Fox, superintendent of the Lincoln State School & Colony acting as host, the dinner speaker the evening of the first day's session was Dr. Anton J. Carlson, emeritus professor of physiology, University of Chicago School of Medicine, whose paper was entitled "Can Research in Our State Hospitals Contribute to the Understanding of the Causes of Alcohol Addiction?"

Cassius Poust, Springfield, is director of the Illinois Department of Public Welfare, and Dr. Harry R. Hoffman, Chicago, alienist, whose division sponsored the program.

MADISON COUNTY

Society News.—"The RH Factor" was discussed by Dr. Raymond O. Muether, St. Louis, before the Madison County Medical Society in Collinsville, January 3. Dr. Muether is associate professor of internal medicine at St. Louis University School of Medicine. Officers of the Madison County Medical Society include Drs. Leo H. Konzen, Wood River, president; Robert H. Greaves, Collinsville, vice president; Eugene F. Moore, Collinsville, secretary, and Duncan D. Monroe, Alton, treasurer.

McLEAN COUNTY

Personal.—Dr. Edwin L. Rypins, who recently was released from military service, has resumed his practice in radiology in Suite 317, Eddy Building, 425 North Main Street, Bloomington.

Society News.—Dr. Archibald Hoyne, Chicago, discussed "Newer Concepts in the Management of Contagious Diseases" before the McLean County Medical Society, January 14.

PEORIA COUNTY

Personal.—Dr. Maxim Pollak announces the opening of his office at 735 Jefferson Building, Peoria 2. His practice is limited to diseases of the chest.

VERMILION COUNTY

Society News.—Dr. James J. Callahan, associate professor of surgery, Loyola University School of Medicine, Chicago, addressed the Vermilion County Medical Society in Danville, January 7, on "Common Fractures."

GENERAL

Postgraduate Conference.—January 22 a postgraduate conference was held at the Louis Joliet Hotel, Joliet, under the auspices of the Post-Graduate Education Committee of the Illinois State Medical Society. More than 130 physicians attended the conference. With Edwin S. Hamilton, M.D., Kankakee, presiding as councilor of the Eleventh Councilor District, the session opened with a complimentary luncheon. Speakers were:

Dr. James H. Hutton, Chicago, "Common Endocrine Disturbances."

Dr. Warren H. Cole, professor of surgery, University of Illinois College of Medicine, Chicago, "Cancer of the Breast." (Kodachrome Slides).

Dr. Frederick H. Falls, professor of obstetrics and gynecology, University of Illinois College of Medicine, "Cesarean Section." (Lantern slides).

Dr. Raymond W. McNealy, associate professor of surgery, Northwestern University Medical School, Chicago, "Primary Anastomosis of the Large Bowel."

Dr. Howard L. Alt, associate professor of medicine, Northwestern University Medical School, Chicago, "Diagnosis and Treatment of Leukemia."

A round table discussion followed the afternoon program. Speakers at the dinner session were Dr. Harold M. Camp, Monmouth, Dr. Percy E. Hopkins, Chicago, and Dr. Hamilton on "Voluntary Prepayment Medical Care Plans." Dr. Hutton gave a brief talk on the problem of tuberculosis in Illinois. This conference was seventh in a series of ten authorized by the Council of the state medical society for the 1946-1947 season. Tentative programs are now being scheduled for in Mattoon, April 17, for the Eighth Councilor District where Dr. Harlan English, Danville, is Councilor, and one for East St. Louis, April 3, where Dr. Grover C. Otrich, Belleville, is Councilor.

Illinois Representation in Orthopedic Program.—Dr. John R. Norcross, Chicago, was chairman of the local arrangements committee of the American Academy of Orthopaedic Surgeons which met at the Palmer House, Chicago, January 25-30. Included among the Illinois physicians who participated in the instructional courses, scientific program and discussions and scientific exhibits were Drs. Dallas B. Phemister, Mary Sherman, Edward L. Jenkinson, Franklin C. McLean, Edward L. Compere, Fremont A. Chandler, Edwin F. Hirsch, Charles M. Pease, Harry Kaelle, Frank G. Murphy and Elwin J. Berkheiser, all of Chicago, and John J. Fahey and Michael de Cosola, Evanston. Dr. Chandler is treasurer of the American Academy of Orthopaedic Surgeons and Dr. Compere, librarian-historian.

New Members of Surgeons' Governing Board.—During the annual meeting of the American College of Surgeons in Cleveland in December, the following were elected, among others, to the board of governors for terms expiring in 1949: Drs. Harry Culver, Arthur H. Curtis, Loyal Davis, Sumner L. Koch, Herman L. Kretschmer and Edward Ryerson, all of Chicago; William C. Danforth, Evanston, Harold L. Foss, Danville.

Licentiates in Medicine Increased in 1946.—A total of 1,082 licenses to practice medicine in Illinois were issued in 1946, more than for any year since the present registration law was enacted in 1923, newspapers report. In 1945, 480 licenses to practice were issued. It was also stated that of the 575 physicians who left Illinois for other states, one third went to California.

Report on Health Survey.—More than fifty aspects of health service are covered in the report of the health survey of Chicago and Cook County which was recently made available. The study was carried on for eight months by the U. S. Public Health Service, and was motivated by a group of agencies interested in the health of Chicago. The group included the health division of the Council of Social Agencies, the Institute of Medicine of Chicago and the Chicago Medical Society. Governor Dwight Green, Mayor Kelly and Mr. Clayton F. Smith, president of the Cook County Board, invited the U. S. Public Health Service to make the study and an advisory committee was appointed to supervise the work and obtain funds, personnel and equipment necessary. The *Illinois Medical Journal* plans in a subsequent issue to make available and abstract of the report. The study was organized in five major divisions: Preventive Medicine, which includes communicale disease, tuberculosis, venereal disease and nutrition; Industrial Hygiene, covering all work done in that field; Nursing; Medical Care, including such items as hospitals, ambulance service and clinics; and Environmental Sanitation, which involves topics like water, sewage disposal, food supplies, air pollution and housing. Critical evaluations of present voluntary and official health agencies were also covered. The objectives of the study were to make a fact-finding inventory of all health forces; to appraise their strengths and weaknesses; to deduce a comprehensive long-range pattern for the mobilization of all health forces in the Chicago-Cook County area; to interpret for the citizens how nearly they are realizing the full value of their tremendous investments in health services and to determine what other investments should be made.

Public Education in Tuberculosis.—A committee for public education in tuberculosis was formed at a meeting in the Institute of Medicine of Chicago,

December 16. Called by the Tuberculosis Control Committee of the Chicago Medical Society, the organization meeting, with Edna Nicholson, director of the Central Service for the Chronically Ill, was attended by representatives of fifty-nine groups in Chicago and vicinity interested in developing a concerted control program on tuberculosis. Mrs. Laura Lunde, health chairman, Cook County League of Women Voters, was chosen permanent chairman of the new committee and Mr. Thaddeus Allen of the Chicago Tuberculosis Institute, secretary. Members of a subcommittee on legislation named at the session are Drs. Jerome Head, chairman, Edward A. Piszczek, director of the Cook County Health Department, and Arthur W. Newitt, tuberculosis control officer of Chicago. This subcommittee has completed the outline of a comprehensive plans including new construction of sanatoriums and legislation concerning financing. In doing this the subcommittee has conferred with Dr. Leslie V. Knott, medical administrative assistant, Illinois Department of Public Health, and other representatives of the department as well as with representatives of the Illinois Tuberculosis Association, Illinois Trudeau Society, the tuberculosis advisory committee of the Illinois State Medical Society, the board of directors of the Tuberculosis Institute of Chicago and Cook County and the boards of directors of the private sanatoriums in the Chicago area. The plan, as developed, will have the support of all of these organizations and was to be presented to the publicity committee at the second meeting January 20.

Medical Education.—The forty-third annual Congress on Medical Education and Licensure, sponsored by the Council on Medical Education and Hospitals of the American Medical Association, was held at the Palmer House, February 9-11. In a round table discussion on "Residency Programs in Veterans Hospitals", the speakers included Dr. J. Roscoe Miller, Chicago, dean of Northwestern University Medical School. Other Illinois participants in various sections of the program were Drs. Victor Johnson, Chicago, Secretary of the Council on Medical Education and Hospitals, and Edwin S. Hamilton of Kankakee who discussed, respectively, "Foreign Medical Graduates" and "Conduct and Value of Practical Examinations in Medical Licensure." These two physicians also took part in a panel discussion on "Present Day Trends in Medical Licensure." Merle Coulter, Ph.D., Chicago, professor of botany, University of Chicago, assisted in a discussion on "Academic Performance of Premedical Veterans," and Raymond E. Zirkle, Ph.D., Chicago, director of the Institute of Radiobiology and Biophysics, University of Chicago, in a discussion on "Medical Applications of Atomic Energy."

Dr. Andrew C. Ivy, Chicago, vice president, Chicago Professional Colleges, University of Illinois, gave the principal address Monday evening, during the dinner of the Federation of State Medical Boards, on "Nazi War Crimes of a Medical Nature."

The Birth Rate in Illinois.—A total of 45,040 birth certificates filed in the division of vital statistics and records, Illinois Department of Public Health, Springfield, made a new record of live births registration, according to a report on mortality and natality in the state for the first nine months of 1946. This number which is 5,600 over the highest third quarter ever recorded in Illinois, brings the first nine month's total to 111,697 as compared with the 1945 figure of 98,204. It now appears that more births will be recorded for 1946 than in any previous year, the report said. The estimated birth rate for 1946 is about 19 live births per thousand population.

The death rate for infants under one year was 32.5 per thousand live births for the first nine months of 1946. This rate is 5 per cent below the average rate for the first nine months of the last five years.

HEALTH DEPARTMENT ACTIVITIES

Cancer Clinic Opens.—A state-aided cancer-clinic for the diagnosis of cancer was opened December 18 at the Marshall Browning Hospital in Duquoin through the cooperation of the Illinois Department of Public Health and the Perry County Medical Society. This clinic brings to seven such clinics now available in different sections of the state.

Health Aids Honored.—Dr. Henrietta Herbolsheimer, chief, division of maternal and child hygiene, Illinois Department of Public Health, Springfield, was recently elected president of the Association of Directors of Maternal and Child Hygiene and Crippled Children Services, an advisory organization for the United States in cooperating with the U. S. Children's Bureau in formulating policies. Dr. Richard Boyd, chief, division of local health administration of department, was elected chairman of the Health Officers Section of the American Public Health Association. He had previously served the group as secretary.

MARRIAGES

WILFRED S. MILLER, Assumption, to Felice Connolly, of Taylorville, November 25, in Kewanee.

DEATHS

JAMES ALEXANDER CRAVENS, Greenfield, who graduated at Washington University School of Medicine, St. Louis, in 1902, died December 5, aged 74. A member of the Fifty Year Club of the Illinois State Medical Society, Dr. Cravens had practiced in Greenfield from 1903 until 1933 when he joined the staff of the Jacksonville State Hospital, retiring from this position in 1945 to return to Greenfield. Schools and business places were closed the day of the physician's funeral out of deference to his services in Greenfield.

GEORGE L. CREMEENS, Springerton, who graduated at Keokuk Medical College, Keokuk, Iowa, in 1895, died December 21, aged 78. He was a member of the Fifty Year Club of the Illinois State Medical Society.

CHARLES MARSHALL DAVISON, Chicago, who graduated at the University of Illinois College of Medicine in 1920, died December 16, aged 50. At the time of his death Dr. Davison was medical superintendent of the University Hospital, an institution founded by his father. He at one time was medical director of Cook County Hospital. At the time of his death he was associate professor of surgery at Northwestern University Medical School and professor of surgery at Cook County Graduate School of Medicine.

STEPHEN EDWARD DONLON, Chicago, who graduated at Rush Medical College in 1895, died at his home, January 6, aged 82, of a cerebral hemorrhage. Dr. Donlon was chief of staff of St. Anthony de Pacua Hospital for many years and a member of the Illinois State Medical Society.

JOHN FAVILL, Chicago, and Winnetka, died December 21 in his home in Winnetka, aged 60. Dr. Favill graduated at Harvard Medical School, Boston, in 1913 and was licensed to practice in Illinois in 1915. He was certified by the American Board of Psychiatry and Neurology and held membership in many groups, including the Illinois State Medical Society, the American College of Physicians, the American Neurological Association, American Psychiatric Association, Association for Research in Nervous and Mental Disease and the Central Neuropsychiatric Association, serving at one time as president of the Chicago Neurological Association. Dr. Favill was professor of neurology at the University of Illinois College of Medicine at the time of his death and a member of the staffs of Presbyterian and Highland Park hospitals as well as a member of the consultant staff to Lake Forest Hospital.

ALFRED FIELDBRAVE, Christopher, who graduated at Bennett Medical College, Chicago, in 1912, died in the Herrin Hospital, October 6, aged 69.

GEORGE ALBERT INGRISH, Chicago, died December 17, in the Little Company of Mary Hospital, aged 40. Dr. Ingrish graduated at the University of Illinois College of Medicine in 1931. He had served in the Army Air Forces from July 1942 to December 1945 when he was released with the rank of lieutenant colonel. He was a member of the staffs of Cook County, Evangelical, Englewood, Holy Cross, Little Company of Mary, Roseland and Woodlawn hospitals, and professor of urology at the Cook County Graduate School of Medicine.

JOSEPH SEMARAK, Oak Park, died December 17, aged 80. A graduate of Reliance Medical College, Chicago, in 1909, Dr. Semarak had practiced in Oak Park for twenty-eight years. He was a member of the Illinois State Medical Society.

WILLIAM NICHOLAS SENN, Chicago, died January 2, in Wesley Memorial Hospital, aged 70. Born in Milwaukee, Dr. Senn graduated at Rush Medical College in 1900 and served his internship at Presbyterian Hospital. The son of the noted Dr. Nicholas Senn, he served in the medical corps of the U. S. Army in the Spanish-American War and World War I. A member of the Illinois State Medical Society, Dr. Senn had not been engaged in active practice for a number of years.

WILLIAM CHARLES OCASEK, Berwyn, who graduated at the University of Illinois College of Medicine, Chicago, in 1935, died November 11, aged 39, of coronary occlusion. Dr. Ocasek was a member of the Illinois State Medical Society, served on the staffs of West Suburban Hospital, Oak Park, and Grant Hospital, Chicago. He was once assistant and instructor in medicine at the University of Illinois College of Medicine.

WILLIAM LIGHTFOOT POWELL, Palmyra, who graduated at Bennett College of Eclectic Medicine and Surgery, Chicago, in 1897, died December 25 in the Carlinville Hospital, aged 86, following an extended illness. He was a member of the Illinois State Medical Society.

FRANK JULIUS RESCH, Chicago, who graduated at Loyola University School of Medicine, Chicago, in 1918, and who was on the staff of the Grant Hospital, died October 12, aged 58, of coronary occlusion.

PETER STROFS, Chicago, a graduate of the University of Illinois College of Medicine, Chicago, in 1931, a member of the courtesy staff of the Mother Cabrini Hospital and affiliated with the Veterans Administration Facility, Hines, died in the Michael Reese Hospital November 5, aged 43, of chronic myelogenous leukemia.